

FARM AND DAIRY

AND
&
RURAL HOME

DEVOTED TO
BETTER FARMING

Peterboro, Ont., June 8, 1916

(S)
Moore W. W.



THE BEST OF ALL WEED DESTROYERS.

Photo on the farm of Col. Robt. McEwan, Byron, Ont.

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Form and Beauty—A Champion, Too.

Seris Mercena Poeh has just completed her record as a 3 yr. old with 221 lbs. milk in one day, 536.3 lbs. in seven days. This makes her a Canadian Champion in her class for milk production. Her butter record of 23.08 lbs. in seven days, 214.6 lbs. in 30 days, puts her among the best. Seris is in the splendid herd of L. F. Bogart, of Napanee, and carries much of the blood of May Echo Sylvia. Note our stock column.

Feeding for the Test

FEEDING cows when under official test is a subject of personal interest to breeders of dairy cattle who value performance ahead of all other things. The methods followed by Fred Blewer, a New York State dairyman, who has made many creditable records, will therefore be of interest. They are described by H. E. Babcock in the Breeders' Journal. He writes:

"Unlike many breeders, who lay special stress on the preparation of the cow before calving, Mr. Blewer believes that one of the most essential things for a successful official test is the ration. This he states must be something that the cows like and do not tire of. Of course, he does not neglect the preparation. He likes to have his cow dry at least two months before she freshens, although he has made some very good records when this has not been the case. When once the cow is thoroughly dry he gradually works her up until he gives her all that she will eat of the following ration: Equal parts of oil meal, wheat, bran, and hominy. This is fed to her three times a day with ensilage twice and hay at noon. With this ration Mr. Blewer has never experienced any trouble with his cows at freshening time, and although they make up large udders, has never milked them out.

The Test Ration.

"After the cow has freshened, Mr. Blewer begins to gradually change from the preparatory ration to his regular test ration. This latter ration is made up of 200 pounds of ground oats, 200 pounds of gluten, 200 pounds of Biles or other good brewing grain, 100 lbs. of oil meal, 100 lbs. of cotton seed, 100 lbs. of hominy and 100 lbs. of bran, making a total of 1,000 pounds, and is fed three times with beetles and once with ensilage. Alfalfa hay is often fed between milkings. While this is not Mr. Blewer's regular dairy ration, he states he believes it would be a very good one to feed with ensilage and good hay, were it not for the difficulty of securing such variety of feeds.

Ordinarily when at the end of six days the cow is completely on this ration and is ready for the test. During the period between the time of freshening and the completion of the official test, she is milked four times a day and fed just before each milking. Each day she is given some exercise. Mr. Blewer, however, takes great care in this matter and is especially careful not to let his cow out where she

will get in drafty places or become suddenly cooled. Unless the day is very favorable indeed, the cow receives her exercise in the barn.

"Change of Milkera Preferred.
"In the matter of milkers, Mr. Blewer again differs from a good many breeders in that he believes a change of milkers is beneficial. He states that it is his observation made on over fifty cows that where the milkers change occasionally a better milk flow is secured.

"Another point about which Mr. Blewer is very careful, is letting the cow down at the completion of the test. He believes that more cows are ruined at this time than at any other period in official test work. He begins by gradually reducing the feed, substituting the four milkings a day until the cow falls below fifty pounds, when he believes she can safely be left to two milkings."

Care of Lighting System

THE farm lighting system must be attended to with great care, says J. L. Mowry in a recent bulletin on "Lighting Farm Buildings." An acetylene gas system is perfect working order is an intricate piece of machinery, he says, and an electric lighting plant is far more delicate. A lighting plant takes more attention than an equivalent number of coal-oil lamps or candles.

Good lighting systems for house and barn, however, add to the attractiveness as well as to the convenience of farm life. Trouble is usually due to ignorance or neglect. The introduction of modern equipment, such as high-efficiency lamps, has done much to encourage the development of small isolated plants and a few years ago may make their use common.

"Not many years ago," adds Mr. Mowry, "many men would not think of getting in behind the wheel of an automobile, much less investing money in such a machine, but now there are few who do not feel that they can care for the power plant which is hung between the front wheels of a motor car.

"The man who puts in the isolated lighting plant should understand it thoroughly and should have made his mind to put it on his list, along with the pigs and the calves and the chickens, to receive its share of personal attention."

Land plaster used freely in the stable will absorb all odors and increase the fertilizing value of the manure.



Trade

VOL. X

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

VOL. XXXV.

PETERBORO, ONT., JUNE 8, 1916

No. 22

Testing and Breeding His Way To Success

How a Young Norfolk County Breeder Discovered the Producing Ability of His Herd and is Taking Advantage of It

MANY men are accomplishing good things in a quiet way on the farm. If little is heard of them it is chiefly because they refrain from heralding their own achievements abroad. They are too busy doing things to bother much about who hears of them, and it is only when they are discovered by some one in the publicity line that the work they are doing becomes known outside the circle of their immediate acquaintances.

Such a man is Ashton Somers, of Norfolk county. While on a trip through that county recently I heard of the good work Mr. Somers was doing with his herd of pure bred Holsteins. Naturally I became anxious to make his acquaintance, to see his farm and stock, and to learn something of the methods by which he was achieving success. Mr. Somers was busy at the spring seeding when I called and could not be expected to spend much time talking, so with his consent I strolled over the farm alone, taking notes as I went. Later, Mr. Somers told me that he and his father had worked the farm together until four years ago, when he took full charge.

The Barns Remodelled.

Two years after taking over the management of the farm, Mr. Somers remodelled the barn, putting in cement floors and up to date stable fixtures. New siding was also put on the barn and a good coat of paint added, thus improving the external appearance very much. One item of interest which was added at this time to the internal fixtures was a large cement trough. It was placed in one corner of the stable in a fairly large box stall. In the winter the cattle and horses, a few at a time, are allowed to come to the trough to drink. This seemed to me to be an ideally located drinking trough for animals in the winter. A certain amount of exercise is given without exposing them to the wintry weather, and the water in the trough is raised to a temperature much higher than it would be if it were outside. A similar trough is provided in the yard for use in mild weather. A windmill is used for pumping the water from a nearby well into an elevated

W. G. ORVIS, Associate Editor, Farm and Dairy

tank. The system is giving excellent satisfaction. The farm consists of 150 acres of the fine clay loam which is characteristic of Norfolk and sur-

rounding counties. Ten acres is kept under alfalfa, renewed only when the stand makes it necessary to do so. Ten to 12 acres is in standing bush, and the balance of the farm, excepting yards, buildings and four acres of orchard, is all other calves kept on the farm, with no special attention given her until she freshened the first time. From this time on she was placed with the best cows kept on the place and given the same care and feed as they received. All of her heifer calves have been retained in the herd, and under the system practised have grown to be good large cows of good dairy type.

The Herd History.

When asked if he considered this amount enough, Mr. Somers said, "We never have any trouble in getting a calf of clover in this district. The reason that I do not sow alsike or timothy is that I only take the one crop of clover and then 'plow the land.'" Surely this is enough evidence of the fertility of this farm, and the likelihood of it ever being depleted as long as this practice is followed. Enough corn is grown to fill a good sized silo. From 25 to 40 head of cattle are usually kept.

About 11 years ago Mr. Somers' father bought a pure bred Holstein calf named Nora Darling. She was allowed to grow and develop like

Four years ago, when Mr. Somers took over the management of his farm from his father, the cows were to be sold. But he had worked with them, and in a sense, grown up with them. Speaking of them, he says: "I could not see the wisdom of letting them go off the place." Consequently he made arrangements for keeping them, borrowing money for this purpose. His neighbors laughed at him because of this, contending that their high class grades were as valuable as his pure bred



A Norfolk County Farm Home.

The house and other buildings on the farm of Ashton Somers.



The Barn and Silo on the Farm of Ashton Somers. Photo by an Editor of Farm and Dairy.

taken up in the regular rotation of crops. Forty to 50 acres of this is sown each spring with grains, such as oats, barley and roots, and nearly all is seeded with red clover. This seeding is done at the rate of eight to 10 lbs. to the acre.

for producing milk for factory purposes. He resolved, however to stay with his cows, as he felt he had things in a fit condition to do so with justice to himself and his animals.

In the meantime a heifer had been sold to Mr.

W. H. Cherry, of Haldimand county. Mr. Cherry exhibited this heifer at the Winter Fair at Guelph in 1913, securing second place in the Dairy Test. After coming home from the show, Mr. Cherry entered her in the Record of Merit test, and she made over 39 lbs. in seven days. "This opened my eyes," as Mr. Somers put it, "and I became anxious to see what some of the others would do under similar conditions." Accordingly, after a short and hurried preparation, several of the cows on the farm were entered in the test and made a combined average record of 26.08 lbs. butter in seven days.

In commenting upon this test work, Mr. Somers said: "I had no experience in the work, and consequently was ignorant of many little schemes for keeping cows up to the limit of food consumption and milking capacity. I was guided around

some disastrous rocks, however, by the kindly advice of the supervisor, Mr. Geo. Hunter, who gave me every assistance possible. I am satisfied that my cows, with better preparation and more efficient handling, would have given better returns."

A High Producing Family.

The story of this herd would be very incomplete without drawing attention to the family relationships in it, there being something very interesting and inspiring about them. The outstanding cow in the family is the one purchased, Nora Darling, who is the foundation cow of the whole herd. Her daughter, Rosaline, is the dam of Mand Snowball, who took the second place at the Winter Fair mentioned above, and who in turn is the dam of a Jr. two-year-old, who in the

(Concluded on page 9.)

All Around the Farm

Summer Suggestions From Various Sources

Building a Concrete Tank

A GOOD mixture for a concrete tank may be made of one part Portland cement, two parts of clean, coarse sand, and four parts of screened gravel or crushed rock. Where neither gravel nor crushed rock is available, use one part of cement to three of sand. If less cement is used than the amount given, the mixture will not wear.

The foundation of the tank should be about six inches thick, enough so that there will be no danger of heaving from frost. It should be reinforced with woven wire. The sides may be reinforced the same as the foundation, care being taken that the reinforcement is placed near the outside wall. Only wire or iron of good quality should be used, as rusted material only fills space and does not reinforce. There should be continuous reinforcement around corners. Where the wire or other material laps, the laps should be several inches.

The form for the tank should be so made as not to crack the cement when taken apart. After the forms are removed, the inside of the tank may be waterproofed by applying a coat of concrete paste made of pure cement and water mixed to the consistency of cream.

The Farmer and Parcel Post

By J. A. Macdonald, Kings Co., P.E.I.

RURAL delivery and parcel-post are two of the greatest boons the farmers have ever acquired. So far parcel-post is only a half measure by reason of the exorbitant rates charged. Its inauguration has, I understand, made little difference in the receipts of its competitors—the express companies. Farmers have never been educated by the postal authorities to utilize the parcel-post, for though high, it is considerably cheaper than express. For instance, I have been able to get a setting of eggs shipped from the Experimental Farm, Ottawa, for 28c, while the express charges on the same would have been 70 cents.

Though the parcel-post is only a half measure, I have been able to utilize it very frequently to my advantage. To-day, for example, I received a pair of plowing back-bands from a mail order house in this province, and last week sent for and received quite a miscellaneous order, including overalls, bridle snaps, collar-pads, and several articles needed for plowing.

I patronize the mail order house through the parcel-post for its great convenience. I am eight miles from town, and the roads this spring have been in the worst condition I have ever seen them, but these unusually bad roads do not pre-

vent the mail-carrier from making his daily rounds. I have the advantage of shopping at home. I look through the catalogue at my leisure, choose the articles I need, jot them down, enclose a blank check—I do not know what the postage may be, place my letter in my box, and in a couple or three days the articles, with the bill, are delivered in the box at my gate. What greater convenience than that could a man look for?

Going to town means expense, and often unnecessary expense. When the distance is eight miles, as it is in my case, the horse needs two

A Few Building Hints

FLOORS AND GUTTERS.

Place layer of concrete 4 to 6 inches thick on well drained cinders or gravel and have the sub-base 6 inches thick.

All stall floors should have a slope of one-quarter inch to the foot. Feeding floors 1/4 inch to 50 feet.

Gutters should be 8 inches deep next to cow, 4 inches deep on the alley side and 16 inches to 18 inches wide. Finish all floors with a wooden trowel so that concrete will be left rough and there will be little danger of animals slipping on it.

STALLS.

Have dairy cow stalls 3 feet 6 inches wide, 4 feet 8 inches in length from edge of manger to gutter. Single horse stalls should be 5 feet wide and double horse stalls 8 feet 6 inches to 9 feet. The average length for horse stalls is 7 feet from edge of manger to end of stall. Manger for cow and horse stalls should be 2 feet 6 inches to 3 feet wide. Box stalls for hospital or maternity are best if 8 feet by 16 feet or 12 feet by 12 feet. Feed stalls should be at least three feet wide, wider if possible.

SILO.

Build to feed 30 pounds a day to each head. Make the height two and one-half to three times the diameter. Build small diameter and high rather than wide and low. Provide feed for at least 180 days.

A silo 12x30 feet will hold 67 tons and feed 15 to 20 cows 180 days.

A silo 14x36 feet will hold 115 tons and feed 35 to 40 cows 180 days.

A silo 14x62 feet will hold 148 tons and feed 45 to 50 cows 180 days.

A silo 16x68 feet will hold 236 tons and feed 60 to 70 cows 180 days.

extra feeds of oats. The day is lost when something might be done at home. When in town many things not very badly needed will probably be purchased. I think farmers might, with advantage, patronize the parcel-post more than they do.

Farmers As Mechanics

By E. L. McCaskey.

THE "Jack-of-all-trades and master of none," has been the butt of many an ignorant jest. I confess to being somewhat of a "Jack-of-all-trades" myself, aside from being a fairly good farmer. I am proud of my ability as a tinker. It has enabled me to make many improvements around my farm and home that I could not otherwise have had. Our cement stables, litter carriers and manure carts, and many of our conveniences we might not have had except for my readiness with tools.

Manufacturers are coming to realize that farmers can do things for themselves. I was recently looking through a catalogue of plumbers' supplies. It advised city folk to have a plumber to install the heating and water systems which the firm had for sale. To its farmer customers, it offered a set of plumbing tools at a moderate charge. This, I consider, a compliment to the farmer. I have friends who have put in their own bathrooms, their own furnaces and carpentering. Papering and painting are also commonly done by home labor.

I suppose it never occurred to the most of Farm and Dairy readers that it is quite an accomplishment to handle the farm implements of to-day. Most of them are complicated machines, such as in city trades, the lads serve an apprenticeship to learn their management.

My object in writing these paragraphs is twofold—first, to encourage my brother farmers to go ahead with improvements which they have not found possible of accomplishment through their own labor, and, secondly, to show the value of a farm training as explaining why our boys do so well in all other occupations into which they enter. One of the greatest values of a farm training is that it instills the idea into our youngsters that they can do things.

Raising the Spring Colt

By J. S. Montgomery.

IT is a poor policy to skimp the colt's feed. The feed and care a colt gets the first year and a half of his life determines largely what it will be at maturity. If the mare is worked, keep the colt in a cool, dark stall during the day. For the first few weeks after foaling, bring the mare to the barn and allow the colt to suckle. Do this in the middle of the forenoon, as well as at morning, noon and night.

Encourage the colt to eat early, preferably feeding crushed oats and bran in equal parts. Let him have alfalfa and clover hay as soon as he will eat it. Experience shows that a ration of corn and alfalfa gives better results than a ration of corn and timothy or prairie hay.

The best ration for the colt during the summer is good pasture grass. Maximum growth comes with a feeding of some grain with the pasture grass. Horses and colts in the pasture should be given ready access to fresh, cool, clean water and to salt. A colt stunted early never fully recovers.

A little attention to the feet of the colt will greatly repay by better feet and legs in the mature horse. The heels should be trimmed, for they soon become high, narrow and rolled under, and the toes should not be allowed to grow abnormally long.

Fight the Flies

By C. W. Howard.

NOW is the time to begin our fight against the house-fly. From 95 to 99 per cent of our flies breed in horse manure, so the obvious remedy is to prevent the collection of quantities of stable litter which might act as fly nurseries. Their next favorite breeding place is the kitchen

garbage and poultry eliminated. Begin early by left around the pile. Then the manure out in summer. This farmer, but to be so. Arrange a field for the principle that the field is of more that during summer may be sufficient the egg to the pile for this length in place. In villages an possible to reme



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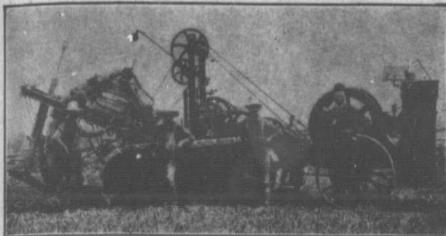
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garbage and privies. These latter can be more easily eliminated than the former.

Begin early by removing all stable litter to the field. See that no small pockets of manure are left around the stable yard after the removal of the pile. Then follow this cleaning up by hauling the manure onto the field each day during the summer. This may seem like a burden to the farmer, but with a little forethought, it need not be so. Arrangements can be made for the use of a field for this purpose, and it is a well-known principle that manure placed at once upon the field is of more value as plant food. Remember that during summer weather a period of five days may be sufficient to produce a brood of flies from the egg to the adult, so that manure left in a pile for this length of time will serve as a breeding place.

In villages and small towns, where it is not possible to remove the stable litter every day,



A Ditching Machine About Ready to Begin Operations.

The excessive precipitation of last summer and this spring have demonstrated as never before the need of efficient systems of the drainage in many parts of Eastern Canada.

a lean-to or a room in the stable may be constructed which is dark and has ventilators covered with fine wire screening. This can be used to receive the manure until it is convenient to remove it. Flies will not enter a dark room to place their eggs and cannot enter a fly-proof room, so the manure is safe from infection in such places.

Flies feed upon filth, such as sputum and that found in privies, but they are also very strongly attracted by the odors of cooking and food in the house. To prevent infection from being carried to our food, every precaution should be used to make the outbuildings perfectly sanitary so that flies cannot enter, and the houses should also have windows and doors fitted with screens.

The motto in fly control should be, "Better sanitation" both in the barnyard and about the house.

Sweet Clover Not a Weed

Is Sweet Clover a weed or a farm crop? In some cases it may be a weed but in other cases it is a farm crop and a valuable one. From the standpoint of a weed, it is not hard to get rid of. It produces seed the second year after sowing. That is, the plant has to be left undisturbed two summers before it can produce seed. Even along road sides thick with sweet clover, it does not spread into grain fields. It will work into a meadow that is left a good many years.

As a farm crop sweet clover has many advantages. Its vigorous growth under severe conditions makes it especially valuable on poor land for adding nitrogen and humus, as well as for hay and pasture. On good soil other crops do well, so clover is not needed. Some, however, think that it has a mission under such conditions, too.

As a cover crop, or for plowing under in orchards for the purpose of adding fertility, it is one of the best and excelled by few. This legume is worthy of some consideration.

Cooperative Marketing of Eggs and Poultry

How 200 Leeds County Farmers Put Their Poultry Business on a Sound Cooperative Basis

WM. J. WEBSTER, SECRETARY LANSDOWNE FARMERS' CLUB

LANSDOWNE FARMERS' CLUB is mainly an egg circle in operation. Its scope, however, is extended to include the marketing of poultry as well as of eggs. The latter branch of work, like the egg circle, aims to eliminate what is not best in quality and no poor grade poultry is handled. The products marketed by the Lansdowne Club are egg circle eggs, guaranteed crate-fatted chickens and fat hens.

Particular attention is being paid to breeding with a view to improving the appearance and quality of both poultry and eggs. This work was begun two years ago by the clubs supplying pure

bred eggs to members for hatching at an advance of six cents per dozen above prices paid for ordinary eggs. The result of this has been that where three years ago there were only some half dozen pure bred flocks in the vicinity, at the present time 95 per cent. of the flocks are largely pure bred. Eggs are graded as "special" and "extra." Eggs grading "special" must be from pure bred flocks and be uniform both in size and color. They command one cent a dozen more than a dozen more than a dozen.

After June 1, non-fertile eggs will be paid for at a premium of one cent a dozen.

With regard to poultry, broilers are largely marketed in July at one and one-half and two pounds. All other birds must be well fattened before being marketed, whether marketed live or dressed. The chickens of the heavy birds are all crate-fattened and killed cooperatively by a man employed for that purpose. The old birds are shipped alive, being graded at time of purchase. Fat ones are shipped at once, and the others put in and fed until fit for the best market. From 400 to 1,000 birds were in feeding constantly during the season just past, from September to March.

Cooperation Satisfactory.

The co-operative work of the Lansdowne Club has proved very satisfactory in each particular line undertaken. The gathering of eggs at the

farm and the introduction of cash payment are both very agreeable factors. The elimination of bad eggs and the consequent enhanced value of good eggs in the warm summer and fall months is encouraging to those who desire proper value. The selling of fall and winter eggs direct to the retail trade is another gain secured. We are independent of the commission man, who reaps a good profit during the season when the supply is scarce and markets are easily manipulated.

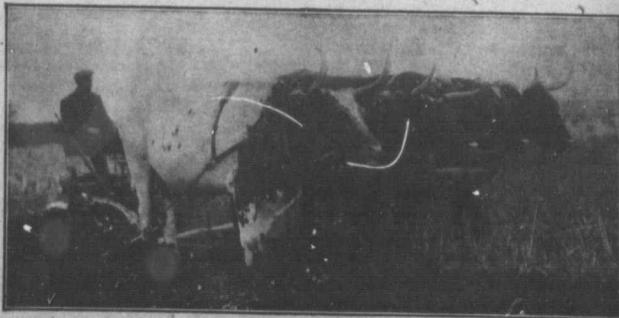
Grading poultry and payment according to quality, feeding and finishing so as to command the best price; crate-fattening and killing of chickens; cooperative marketing, which places us in touch with both retailer and packer; the possibilities of cooperation in distributing the output over a lengthy season; all these have worked to the advantage of the cooperator.

Large Business Done.

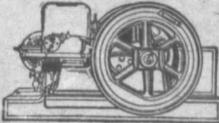
Our egg circle was organized in connection with the club four years ago, and after struggling through a series of failures, began serious work during the second year of its existence. That year, 1913, 7,552 dozen eggs and 474 lbs. dressed chickens were sold. The following year, 1914, the output of eggs was increased to 16,000 dozen, and poultry amounting to \$2,254.73 was sold. During the past year, 35,777 dozen of eggs and poultry amounting to almost \$4,000 were sold.

The present season we appear to be working with the united endorsement of the whole community. We are entirely lacking a competitor in connection with the poultry end of the business, and with the eggs practically all who are within reach of this shipping point are egg circle members. Our membership is close to 200, and in the neighborhood of 100 cases weekly are being shipped.

The grade in the road determines the size of load that can be pulled over it. A good way to learn the effect of grade is to ride a bicycle on the level and up different grades. It will very quickly be found out how grades affect the pull. One argument against going around a hill is that it makes the distance greater. This is not always the case. The ball of a pall is no longer when laying down than when standing up. One bad grade in a road may easily double the cost of hauling over the road. The work of grading down a hill usually costs more than to buy the land required to go around it.



The Pioneers of All Countries Have Found Oxen to Be a Cheap and Efficient Source of Farm Power.—Photo on a Homestead near Battleford, Sask.



Here's a Great Little Engine For \$42.50

Think what it will do for you. . . . Used with a Governor Pulley, it will run your Cream Separator and do it more smoothly than you can turn it by hand. It will pump all the water for your stock as well as for your house.

It will churn, or operate your wife's washing machine, and thus save her that part of the household that women dread.

At a cost of 25 per hour for fuel, does this look like economy to you?

Does it look reasonable to pay high wages to hired help when this little wonder of an engine works for so much less, and never asks for more pay?

If you would know more, you may write us without any obligation to buy.

We have much larger engines for heavier work priced as follows:

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Where Holsteins Can Stand Improving

Some Frank and Friendly Criticisms of the Breed by One of Its Friends
HOLSTEIN breeders have become so accustomed to hearing their breed spoken of in the most flattering language that some of them have almost come to regard their black and white sires as faultless. If any of these over-enthusiasts were present at the annual banquet of the Holstein Association in Toronto a couple of years ago, their fond beliefs must have been rudely shocked. Prof. H. Barton, of Macdonald College spoke on the subject of "Defects in the Holstein Breed," and in all for the good spirit possible and the most friendly of the breed he outlined a few characteristics in Holsteins that are not desirable, and to which the breeders may well give heed. Recently in going through an old file an editor of *Field and Dairy* came across notes taken on that address, and as these notes have not previously been published they are given herewith with the following:

The following is a synopsis of the address of Prof. Barton.
"There is often danger in over-confidence," said Prof. Barton. "An honest survey of the business we are in is often necessary to occupy the unique position of being both a breeder, a student of the breed and an investigator. I have unusual opportunities to hear what people have to say about Holsteins. I came here more as a reporter than as a critic to tell you of the criticisms of your breed that I have heard on the negative side. In recent short course and extension work we have heard the opinion of the average man on the various breeds of cattle. These opinions are not worth as much as the opinions of men in the older lands, as there is much ignorance in the average mind in regard to stock, but these opinions must be heeded.
"The first charge that I have often heard against the Holstein is that it is hard to feed. This criticism is easily answered and generally to the satisfaction of both parties.
"The Low Test Problem.
"The second charge is not so easily answered. It is that the Holstein gives poor milk. This idea is prominent in the minds of people generally and Holstein breeders have to meet this as the breed is laboring under a handicap because of the low test milk.
"We Holstein breeders, for I am a breeder, have been following a course that is poorly balanced. We have been following short period tests which have had a wonderful influence in the development of the breed, but in regard to fat content, the results of these tests have not been satisfactory. Were I breeding Holsteins to-day I would pay more attention to the high per cent. of fat in the yearly record than to the best short time test.
"Our surplus stock must be our advance agents in finding us new customers. If we sell stock on their short time records and they make a poor yearly showing, this stock may work our business much injury. We breeders should be the first to recognize defects and remedy them.
"The Type of the Holstein.
"A few words on type. For a long time I was unable to bring myself to appreciate many of the so-called good Holsteins. As I came to know more really good breeders and to get their judgment of Holstein type, I found that the best of them were working on a reasonable and utility plan. If there is anything in type at all then I believe that all dairy breeds should be gradually going towards a gives point. If there is a desirable type for producing Holsteins, why should not the same type be desirable for the Ayrshire & Jersey. This is true in the case of the best breeds. Eliminat-

ating certain breed characteristics, all best breeds have practically the same type. If there is a utility type the same must be true of the dairy cow.
"A couple of years ago I brought a good Holstein cow before the course of Ayrshire sire at Macdonald college. If I changed the head and the color of this cow would she not make a good Ayrshire? I asked the assembled breeders and they did not disagree; another evidence of the tendency towards the same type in the best cows of different breeds.

Breediness.
"Breed character and breediness are important characteristics. Holstein men have emphasized them as little as they. We have far too many plain common looking animals in the black and white breed, and yet this breediness is valuable as indicating the ability of the cow to transmit the best qualities of the breed. I have several helpers from her and only one was creditable enough to remain in the stable. She is plainer than her mother and though now well up in years, we have had some good heifers from this plain daughter of a plain cow.
"We, all Canadian stockmen are not thorough enough. The Old Country men discuss upon the importance of 'breediness.' Is not the difference between a class of Canadian and imported Clydes or Guelp or any other show, a difference in 'breediness,' the Canadian's lacking in this respect?"

Importance of Size.
"Good size is a factor for which we must work. In a census taken of cows in several herds it was found that cows in the first class producing 12,000 lbs. of milk weighed 1,200 lbs. or more. Cows producing 6,000 lbs. or less, numbered only four heavy cows in the bunch, and these tended to be beefy. Size, however, is desirable only as we get other things in keeping. If we get beyond a certain limit, size is in a distinct disadvantage. If other factors are not developed in equal proportion.

"When we come to discuss uniformity we are due for a range of variation in any breed. Progressive breeders are speeded up. Herds can be criticised more than most breeds for lack of wedging to uniformity. I believe that the chase for records contributes to the fact that the Holstein breed cannot afford an object lesson in uniformity. Many herds are a conglomerate mixture that have as many types and families as there are individuals. Uniform results in such a herd are impossible.
"How Breeds Are Made.
"If we study the methods of the breeders who have made breeds we find that they collected together the strains that worked best together, because they are alike and have worked from that foundation. I can not argue the for in-breeding, but for the coming of breeding operations closer than is usual.
"In our herd at Macdonald college we have Ayrshires that are fully the equal of any Canadian. When we came to breed within the herd we soon discovered that certain cows were producing producers. To-day we have the same number of Ayrshires, but only one-quarter as many families. We have uniformity of blood and type that is hard to equal in this country. This we consider good breeding.
"As a people we can characterize

(Continued on page 3.)

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POULTRY



Poultry Pointers

No matter how good the stock may be, if they have not the proper care they will be no better than mongrels. Poultry on the farm, as a rule, receives indifferent treatment. What does "Care" mean? It means a close watch on the business, provides every comfort, prevents disease by keeping the premises perfectly clean, never overcrowds and keeps the fowls busy, sorts out the drones and gives the workers better attention. In short, care means using business principles in every sense of the word.

The farmer is not giving proper care when he allows his fowls to roost on trees, in wagon sheds, or on board fences; the proper care is not giving it the appetites and conditions of the fowls are not studied.

System and regularity play an important part in care; economy in labor, the saving of steps, the saving of muscle, the saving of time—all are important. Shiftlessness causes dear experience. There is a profit in anything we take care of. Success is according to management. Profits depend upon the quality and quantity of brain work put in the enterprise.

If a man performs his work in a mechanical way, he will not be apt to do it well. There are too many who go by "ruck". They do not stop to think. They do not take notice of the little matters. They are always hurrying to get done. Too many assume too much work.

The poultryman who follows a practical system does not complain of the work. System is a great labor saver in all occupations, and especially so in raising poultry. The man who has no regular method causes himself extra work, stating that it will be all right. In summer this refuse, when removed once a day, is unspokeably foul, and the one who removes or handles it needs the nose of a scavenger. Fermented and decaying refuse from such places is noxious, even to handle. In this "garbage" are often found pickles, sour things, rotten potatoes, tainted meat and other stuff—even including coffee grounds—fit only for a manure pile. We cannot be too careful in what we feed our stock. Fowls should have perfectly sound feed, or they will not enjoy perfect health.

Watch the chicks closely and mark the ones making the most satisfactory growth. Select the ones that are plump, full-breasted and in good proportion. One will not care to keep those that grow leggy and have thin breasts.

A Formin Selling Record

EDITOR, Farm and Dairy.—I have just got the returns in for our county and find that one of our Napanee druggists has sold over 50 gallons of formin in bulk and two gross of formin in one and half bottles, making a total of 688 lbs. of formin for the spring of 1916, for treating grain for smut. I believe this to be a record for Ontario.—G. B. Curran, Lennox and Addington, Ont.

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| Alberta Grimm, No. 1, lb. 7c | Rape (Dwarf Essex), lb. | .10 |
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| Crates Bags. | Rye Buckwheat | 1.35 |
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That is the way Mr. Donald Brown, of Bloomfield, Ont., sums up his experience with the

EMPIRE MECHANICAL MILKER

Mr. Brown writes:

"Having purchased one of your Empire Mechanical Milkers, I feel that I can strongly recommend both its efficiency of milking and its ease of operation. The cow takes to it well and resists it to hard milking. Never had any symptoms of teat or udder trouble. I can milk my twenty cows with one double nut quite readily in an hour. I hope to increase any unit this year, when I will be milking from 25 to 40 cows."

It has put an end to a lot of hard work and solved the milking problem well."

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HORTICULTURE**Strawberries Demand Moisture**

THE strawberry is about ninety per cent. water. Only on a soil retentive to moisture or where the moisture is held by dust or straw mulch, can it be expected that the straw will hold up throughout the season. The plant and fruit respond readily to irrigation water, and experiments indicate that when water is applied judiciously and at no time in excess is essential. Standing water is weakening to the plants, and when continued destroys them completely.

How to Know Mushrooms

By W. W. Robbins.

IT is difficult to lay down any hard and fast rules that can be used to distinguish between edible and poisonous mushrooms. In some cases, a species that may be harmless for one individual may cause serious digestive disturbances in another. There is, however, one group of mushrooms that is deadly and quite poisonous. This is the group of Amanitas. The deadly

Amanitas have white gills, a ring about the stem just beneath the cap, and a cup or scales at the base of the stem.

Do not place any reliance in the many popular and traditional tests of poisonous or edible qualities. These tests are entirely worthless. The discoloration of a silver spoon, sinking in water, or brilliant coloration are no indications of either poisonous or edible qualities. Furthermore, the notion that poisonous mushrooms can be rendered harmless by boiling in water and then washing thoroughly in cold water is absurd.

One can easily become familiar with a few edible kinds of mushrooms. There are many of these springing up in our lawns, door-yards, and along fences. One may feel absolutely safe in using all these mushrooms, having black gills which dissolve with age into an inky mass. These, of course, must be eaten before turning black, but usually several strings of ripening will be found in the same clump or group of individuals, so that identification can be made. Among these black gill species are the "shaggy man," with a more or less bell-shaped, or cream-white cap which becomes shaggy, and the "inky-cap," growing in dense clusters. These two are both common in lawns, gardens, etc., from spring to autumn and are among the best of our edible mushrooms.

The deadly mushrooms are those which possess the following three characters: (1) white gills; (2) a ring on the stem just beneath the cap; and (3) a cup or scales at the base of the stem.

Fruit Prospects for 1916

THE Fruit Branch of the Dominion Department of Agriculture has issued its June fruit crop report, giving the prospects for fruit in all parts of the Dominion and in some sections of the United States. Prospects are bright for a fall crop, both of trees and small fruits. Apples, peaches and pears promise exceptionally heavy crops, through a continuation of the wet weather may induce the development of scab, which would result in a heavy June crop. The first Ontario strawberries should be on the market before the middle of June and special efforts are being made to prevent repetition of the over-facings of berry crates, a considerable amount of which was in evidence last year.

There is a danger that apple growers may give up spraying in the belief that there is not going to be a good demand for apples. The Department, however, is pointing out that last year and 1914 also, prices for No. 1 fruit were quite satisfactory and during the early spring months of this year the demand could not be supplied. There is no demand for inferior fruit.

Safety First

L. Thompson, Peterboro Co., Ont.

WHEN driving home from the city last market day I arrived at the level crossing just as the edge of the city at the same time as a passing train. The gates were lowered to keep the path clear for the on-coming locomotive and I had to wait. Had it not been for those gates I might have attempted to get over ahead of the train with serious results to myself. While waiting for the train to pass I noticed these words painted on the gates, "Safety First." As I was driving past our own little shipping point I noticed the same words placed prominently on the side of the station house. I suppose that the same words are placed prominently along the railway tracks from one end of Canada to the other. I notice that our magazines, too, have been

talking about the "Safety First" precautions of the railroads.

I had just finished reading such a magazine article recently and picked up the news-paper when the first thing that struck my eye was the heading "Farmer Gored by a Bull." The note under the heading went on to explain that the bull was considered "perfectly quiet." Wouldn't it have been a good idea to have had "Safety First" painted on the bull stall? It might have induced the farmer to lead that bull out on a staff rather than by a line.

Other instances came to my mind. One of my neighbors was smothered to death when he went down into a silo, although he knew well that had he lowered a lighted lantern into the silo first the extinction of the light would have indicated the presence of dangerous gases. A neighbor's boy was carried up on the hay fork last summer and almost killed. A reasonable amount of caution would have prevented this catastrophe also.

How often farm tragedies such as I have mentioned are caused by lack of "Safety First" precautions. If there is any one class of men who are the most dangerous of occupations such as railroading, they should pay heed to the "Safety First" motto by the silo first, particularly the farmer with a "perfectly quiet bull."

Prof. Zavitz Honored

THE services that have been rendered to Canadian agriculture by Prof. C. A. Zavitz, of the Ontario Agricultural College through his work in conducting experiments in field crops and originating new and superior varieties, has been recognized by the University of Toronto, which conferred upon him the honorary degree of Doctor of Science. Prof. Zavitz was presented by Dr. C. C. James, who commented upon the great work he had done and referred to him as one of the recognized plant breeders of the agricultural world.

Wayside Gleanings

By W. G. Orvis, Field Representative, Farm and Dairy.

Keeping the Bull

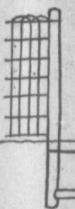
WHILE visiting Norfolk Co., Ont., I had a chat with the proprietor of Cornish Lodge Farm and, of course, the conversation turned to the discussion of dairy cattle. He said that his advice to all breeders would be to keep the sire at least until his daughters had been proven. "I sold my bull Vida's Woodland Sarcastic for beef," he said, "and a short time afterward my six daughters and their daughters to freshen under test. They gave me an average record of 418 lbs. of milk and 17.9 lbs. butter in seven days. It would have paid me in many ways to have kept this bull and used him, or to have sold him to some other breeder. "s value of sire is in direct proportion to the milking qualities and type of his offspring."

Shall We Cultivate After Rain. I hear a real many farmers asking this question this year, especially when there has been a downpour just after they have finished sowing a field of grain. A few days ago I had a conversation with a man from the Central Experimental Farm and told him concerning the advisability of harrowing land, especially if it were liable to bake, providing the grain had been recently sown. He told me that the harrowing would not do, but grain would break up the soil so as to prevent baking. This would check the evaporation of moisture.

Gate Posts

THE appearance of gate posts around a great many farms is a device utilized to keep the gate from swinging out. By putting a post on each side of the gate, the gate will be dispensed with, the posts will be placed on each side of the gate, at least three feet from the hinges, which keeps the gate from swinging out. The posts are placed in place. A half a dozen strands of wire are placed around the posts and twisted to tighten.

Before the Bill is completed, it is possible to be wire on the post. The wire cable or post is sufficient to hold the wire fence, if the wire fence, if the



is in an upright position, the wire fence will be held, leaving the gate below the surface.

Testing and Breeding

To S

(Continued)

recent test conducted made a record of 100 lbs. in seven days. Similarly running for four generations, the example of the old hegets like. A fine bunch of seven in a box stall mark was made over-smiled. "My calves at all, been experimenting by feeding them. We have been feeding the milk and increase in weight they are now. This is no day for them, as better when they are in it, but they do well as our calves are getting roughage they are why, and despite satisfaction, very thrifty.

An inexpensive one that commends itself, was a loan called on it, hanged for each cow's head printed in large letters the name of the cow, and the full name of Mr. Somers said that many people keep their cows in the name that I invented they could read for

A Divers. The main source of farm are the cows to 15 are kept, are these factors. The food ones that. Besides the milk,

Is It A Gamble?

IN the dark ages it used to be said that a life insurance policy was a gamble in which the assured had to "die to win." What are the facts?

If the husband who is uninsured dies, the wife and her children stand to lose all; if he lives, they will be provided for. The risk is taken by the wife where there is no insurance. She gambles on the chance of her husband living.

The life company, for a premium which has been accurately calculated, can take the risk because it insures large numbers of whom only a certain portion die in any one year. Where a policy is taken, therefore,—

The company runs no risk; the assured runs no risk; his wife and children escape the risk. Thus life insurance is a system that eliminates gambling.

Mutual Life policies, besides protecting the family, are good investments. The splendid profits earned by the Company go to the policyholders exclusively, there being no stockholders to share in the profits of a mutual company.

Life, Limited Life and Endowment Policies.

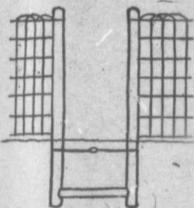
The Mutual Life

Assurance Company of Canada
Waterloo, Ontario

Gate Posts Without Braces.

The appearance of the fence that surrounds the home grounds is greatly improved by means of the device illustrated in the accompanying cut. By it the unsightly braces on each side of the garden gate may be dispensed with. In order to stand up well, the posts should be put down at least three feet. Instead of post holes a trench is dug so that the brace which keeps the bottoms of the posts from crowding together, may be secured in place. After this is done, the trench is filled up about half way and half a dozen strands of galvanized iron wire are placed around the posts and twisted to tighten in the ordinary way.

Before the filling of the trench is completed, it is best to put the woven wire on the posts and to tighten it. The wire cable can then be tightened just sufficient to bristice the pull of the wire fence, and the posts will re-



main in an upright position. "The filling of the trench may then be completed, leaving the cable a few inches below the surface.

Testing and Breeding His Way to Success

(Continued From Page 3.)

recent test conducted on the farm, made a record of nearly 21 lbs. of butter in seven days. There is a marked similarity running through each of the four generations, giving a wonderful example of the old breeding law that like begets like.

A fine bunch of young calves were seen in a box stall. When some remark was made about them, their owner smiled. "They do not look like my calves at all," he said. "I have been experimenting with this bunch by feeding them pasteurized whey. We have been gradually decreasing the milk and increasing the whey, until now they are receiving nothing but whey. This, no doubt, is the hardest time for them, as they will likely do better when they get more accustomed to it, but they do not look nearly as well as our calves usually do." These calves are getting old cake and any roughage they will eat beside the whey, and despite Mr. Somers' dissatisfaction, were looking fairly thrifty.

An inexpensive and novel idea, and one that commended itself to me very highly, was a board with a carboard nailed on it, hanging from the ceiling, over each cow's head. On this board, printed in large type, were the full name of the cow, the date of her birth, and the full name of her dam and sire. Mr. Somers said regarding this, "So many people keep asking me about the different animals and their breeding, that I invented this method so that they could read for themselves."

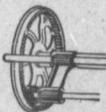
A Diversified Farm.

The main sources of profit on this farm are the cows, of which from 10 to 15 are kept, and the milk sent to cheese factory. This factory is one of the good ones that run the entire year. Besides the milk, there is consider-



A Frost and Wood Mower starts to Cut the Mowest the Horses Move

WHY is the Frost & Wood Mower light in draft? We use only the finest, toughest materials that money will buy, consequently wear and tear is less. In addition we use expensive-to-make, high grade roller-bearings wherever friction might occur. Heavy brass bushings prevent wear and keep drive shafts in absolute alignment. Cutter bar is quick control and goes on cutting when needed to clear an obstruction, saving time.



Internal gear drive means big, quick power.

The Frost and Wood Mower Will Not Fail You

THE Frost & Wood Internal Drive Gear is a splendid engineering feat. The big driving gear wheel engages on the inside with the cutter-bar operating pinion, both wheels travel in the same direction, there is no "pushing apart," snapped coes, lost power or lost time in starting cutting. This saves tremendously on wear and cuts repair bills to practically nothing. Levers are easily worked. It is no exaggeration to say a boy or girl can operate this machine.

Frost and Wood Rakes

Here is an all-steel, practically indestructible rake good for many years of hardest service. Automatic dumping trip acts instantaneously. The teeth have high clearance and do not drag the top of the windrow. Dumps at slight pressure on foot pedal. Teeth are especially fine tempered steel, every tooth carefully tested before it leaves our factory. The Frost & Wood Rake will stand any test and has thousands of friends all over Canada.



Our nearest Agent can Advise you on any Implement need and give you Folders and Particulars on the above Implements

The Frost & Wood Co. Limited
Montreal, Smith's Falls, St. John

Sold in Western Ontario and Western Canada by:

The Cockshutt Plow Co. Limited
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Homeseekers Excursions
Every Tuesday, March to October
"All Rail"
Every Wednesday During Season Navigation
"Great Lakes Route"

Remember out on the prairie where last year Canada's Greatest Wheat Crop was produced there is a home waiting for you. The **CANADIAN PACIFIC**

will take you there, give you all the information about the best places, and help you to reach them.

Preticulars from any Canadian Pacific Ticket Agent, or write W. R. Howard, District Passenger Agent, Toronto.

Where Holsteins Can Stand Improving

(Continued From Page 6.)

ourselves as having been somewhat extravagant working our farms and in marketing produce. This extravagance has extended to Holstein cattle. I have every respect for the phenomenal cow. But for me and the average man give me the normal creditable worker somewhat within the capacity of the breed, and I shall be content.

"Everything I have said has been given with the best interests of the Holstein breed in view."

FARM AND DAIRY

AND RURAL HOME
PUBLISHED EVERY THURSDAY



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The paid subscriptions to Farm and Dairy exceed 21,000. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, and sample copies, varies from 27,000 to 23,000 copies. No subscriptions are accepted unless they fall within the full subscription rates.

Sworn, detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

OUR GUARANTEE

We guarantee that every advertiser in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers, we turn away all unscrupulous advertisers. Should any advertiser herein deal dishonestly with you as one of our paid-in-advance subscribers, we will make good the amount of your loss. Should such transaction occur within one month from date of this issue, that it is reported to us within a week of its occurrence, and that we find the facts as stated, it is a condition of this contract that in writing to advertisers you state: "I saw your advertisement in Farm and Dairy."

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The Rural Publishing Company, Ltd.
PETERSBORO, ONT.

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

"After the War" Problems

AMPEREHENSEN is already felt by many of our leading economists and statesmen concerning the problems with which we will be confronted after the close of the war. It is thought that we may have to face a serious business depression and its attendant unemployment. The close of hostilities will mean the cancellation of unfilled war orders and the release of labor hitherto engaged on them. The return of thousands of soldiers will swell the army of those looking for employment. The millions of Europe, crushed beneath the load of taxation levied to pay off war debts, may seek to escape from the burden by emigrating to Canada. There are many indications that we shall have a serious unemployment problem at the close of the war.

Once before on this condition similar to that which is expected was faced. At the close of the civil war the victorious armies of the north were disbanded. Apprehension existed as to what effect this throng of nearly a million men would have on the labor market. The apprehensions, however, proved groundless, for the disbanded soldiers were absorbed in a marvellous manner by the great prairie states of the upper Mississippi valley, which were then just opening up. The flood of returned soldiers flowed out upon this free land. The transition from war to peace conditions was accomplished without upsetting the industrial conditions of the country, and the United States was soon forging ahead as never before in her history.

The condition of Canada after the war will be different from that of the United States at the close of its great struggle, in that free land of the best quality is no longer available. Vacant land, however, there is in abundance. It is estimated that at least eight times as much land is held for speculative purposes in the three prairie provinces as is under cultivation. If this land

were made accessible to the returned soldier, released munition worker, and the impoverished immigrant, depression and unemployment would be largely averted. There would always be a way of escape open to the one under economic pressure in our industrial centres, just as there was during the halcyon days in which we had abundance of free land of good quality for everybody. If, on the other hand, the speculator is allowed to hold the larger proportion of our best land at prohibitive prices, no such escape is possible for the majority of workers. The resulting situation will be as dangerous as a boiler under pressure without a safety valve.

The Way Out

To provide against the possibility of a great unemployment problem following the war and to secure a way out of the railway muddle in which we find ourselves is not two problems, but one. These two great questions meet on common ground, and that is the disposition of vacant land already served by railways and held out of use for speculative purposes. If it is made available to the worker, so that if he loses his job in the city, he will have an opportunity of becoming his own employer on the land, the safety valve is provided that will prevent a labor explosion. If the quarter sections are filled up and put to productive use, the extra traffic provided would soon put the railways on a paying basis. The land question is at the root of both difficulties.

To make these great areas of land available to the workers may require heroic measures, but the seriousness of the situation that may arise may demand them. People are talking of the new world we are going to have after the war closes. To remove the burden that the war has imposed may necessitate the removal of some of our most cherished delusions, and among them the one that rights to land, no matter how acquired, are more sacred than human rights. If the choice has to be made between the industrial reign of terror that some are freely predicting and the introduction of measures to free the land from the control of speculators, the obstacles for their removal may not prove so formidable as they may seem.

Already something has been done along this line. British Columbia has passed a law which has made it impossible to hold land in that province on margin. A person who has secured control of a tract of land by paying only a portion of the purchase price is given enough of the land to compensate him for his equity, the balance reverting to the people. In Alberta a tax has been placed on unimproved wild land, the money thus raised being used for provincial purposes. In Saskatchewan a surtax of ten dollars a quarter section is levied on unused land for municipal purposes. Last year one and a half million dollars was raised in the two provinces by means of these measures. The extension of the principle of land value taxation and the curtailment in any way of the privileges of speculators has the effect of making the holding of land out of use unprofitable and of getting it into the hands of those who wish to use it for productive purposes. The result would be the solution of both our labor and railway problems.

Ocean Freight Rates

ALTHOUGH so many ships have been destroyed since the outbreak of the war it does not appear that the shipping interests are losing money on their business. On the contrary, they seem to be prospering amazingly by the war. The increase in freight rates from New York to Liverpool in the last two years has been about 900 per cent. on wheat and from 400 to

500 per cent. on other foodstuffs. On other things it is safe to assume that a similar increase has been effected. The average earnings of a vessel is about five times what it was previous to the war.

This increase is not all necessary to cover losses inflicted on shipping by the enemy. The rise in insurance rates does not account for a tithe of the increased freight rates. It is due principally to the shortage of vessels for the ocean carrying trade. This is accounted for by the loss of ships which have been sunk or destroyed by the enemy, by the commandeering of ships for transport purposes, and by the internment of many enemy ships in neutral ports. The result is that freight rates are not to be measured by the real cost of transportation, but by the anxiety of the shippers for space. The whole business is one gigantic holdup, but no immediate way out of the difficulty seems to have been suggested. The warring nations will emerge from the war with a new crop of millionaires to which the shipping industry promises to contribute more than its share.

The Need of Lime

INVESTIGATIONS carried on by the Ontario Agricultural College last year showed that there are many districts where the soil is badly in need of lime. Thousands of tests were made, the results of which showed that the surface of the soil was sufficiently acid to react on limus paper, and in many cases it was necessary to go down several feet in order to secure soil sufficiently rich in lime to cause an effervescence when treated with an acid.

As a result of the investigations, steps were taken to bring to the attention of the farmers of the province the necessity of applying lime or other calcareous material to their soils. It was pointed out that much more lime is required in a soil than that which is necessary for plant food supply. Lime is a soil amendment, that is, its presence is required to provide suitable conditions for plant growth. No soil which is acid in its reaction can produce maximum crops. It is interesting to note that as a result of the educational work carried on, good results are already becoming manifest. The increasing use of lime, basic slag and other calcareous materials, shows clearly that the farmers are alive to the situation. Reports from many districts throughout Ontario indicate that the farmers are taking hold of the situation and applying calcium in some form or other in an endeavor to bring the soil back to the alkaline condition that is so necessary if maximum crops are to be secured.

Two Opinions on Cooperation

THE cooperative plan is the best plan of organization, wherever men have the right spirit to carry it out. Under this plan any business undertaking is managed by a committee, every man has one vote and only one vote; and everyone gets profits according to what he sells or buys or supplies. It develops individual responsibility, and has a moral as well as a financial value over any other plan.—Theodore Roosevelt.

"The purchasing power of the people—the profits on the things you must buy and sell—is your most valuable possession. You can, if you will, cooperate with your own neighbors, establish and run your own business, and thereby save to yourself and them this most valuable possession; or you can by refusing to do so, continue as in the past, building up the unjust corporations and 'swollen fortunes' of the 'special privileged few,' by continuing to patronize their system."—The Cooperator.

Farm Management

Returns From Work Horses

A. H. Benton, Minnesota.

ONE of the most fruitful sources of loss on the farm is an insufficient return from work horses.

Have you satisfied yourself on the following points?

Do your horses earn enough to pay for their feed and care, and enough to meet the interest, depreciation, and other expenses, as harness costs and shoeing?

If costs \$100 annually to keep the average horse, but this horse works only a little more than three hours each working day. This makes the horse labor cost approximately 10 cents an hour.

Do you handle the horse labor on your farm so that the annual cost of keeping your horses is less than the average, or so that the number of hours worked is greater? Both methods will reduce the cost of horse labor, but the latter offers by far the greatest opportunity.

Can you revise your cropping system so that fewer work horses will be needed, or so that the work will be more equally distributed and thus make it possible to employ them more hours each year?

Can you raise colts and thus reduce the cost of keeping your horses?

Can you arrange to use your work horses for outside work when not busy on the farm?

Can you reduce the cost of keeping each horse by feeding less proper or cheaper feed and still give a proper ration?

Farm work done with fewer horses means a saving of \$100 a year for each horse not needed.

Farm Management Pointers

AT the last Ottawa Winter Fair J. H. Grisdale, director of Dominion Experimental Farms, gave a general talk on the subject of "Farm Management." Some of the pointers that we gleaned from Mr. Grisdale's address are as follows:

Farm management is farm business. We cannot all have all the land we want, but we can run the land we have in a much better way than we do. We should increase the output of the average farm 50 per cent. at least, and it would be profitable, even if the labor expense is greater.

In buying land don't pay more for land than you can realize interest on. Many fall down in farming because they have not enough working capital—not enough stock, not enough machinery, poorly equipped buildings, and so forth. It is possible, however, to have too much money invested in this way. There is a happy medium that spells profit.

A good farm manager must have a knowledge of values. He must be able to grasp the importance of little things, but he must not attend to the little things to the disadvantage of the big things.

What is the profitable balance between the live stock and the feed produced on the dairy farm? I would say, carry a little beyond in stock, what the farm will feed. The stock, of course, must be good, and then the small amount of feed which must be produced can be fed profitably.

Low cost of production is the most important consideration in farming to-day. Operations must be timely, and at least 25 per cent. of our farmers fall down here.

Three horses are not enough for a 100-acre farm. At least four horses and a driver are required. We cannot work those horses the year round in

Canada, but we can winter them very cheaply and with good results to the horse on oat hay and pulped turnips, with a little oats later on.

The large machine is the coming machine.

Have some system in your farming. The man who does not follow a rotation of crops is in a fair way to get one-half to two-thirds from his farm of what he should.

A good farm manager will do everything possible in the winter time to cut down the work in summer.

In marketing we need to be better business men. The buying also calls for wisdom.

Cooperation amongst neighbors will do much to permit the use of large machinery.

Shall we grow money crops? I believe in them to a limited extent. The choice of crop will depend on such circumstances as soil, location and markets.

Fifty hours a year of cost accounting would be time profitably spent. Most of our failures are due to not knowing just where we are at. There is scarcely a farmer who is not doing something at a loss and does not know it.

My Spring Experience

Hiram Wheeler, Prince Edward Co., Ont.

WE have our spring crop in at last, and a time we have had to wait for. I never know the land so hard to work.

Most of our farm is clay land and it got very water-logged with all the rains and the grass got a start, which made it still harder to work. Speaking of the condition of the soil, some of ours was just like liver. It did not seem to have life in it at all, especially in the low parts that needed draining. Part of one field was very sooty, and had some twitch grass in it and I could not seem to get it fit to sow. I left it and am going to keep it worked as best I can for a while and later will sow buckwheat on it.

We have been very busy drawing out manure and working on corn and root ground this last week. If I am spared another year, I am going to get most of the manure out in the winter. Here we are away behind my nearest neighbor with our corn and roots. He kept drawing the manure all winter and, when it was so wet this spring, he often got a part of a day in which he could plow some of it in when his other land was not fit for working. He was in a position to work away at that ground and now he has it in mine. I intend getting the land in as good shape as possible before sowing, as I believe extra working now pays later on.

When in town the other day I saw a notice in the district representative's window to the effect that some company in the States was selling Prof. Zavitt's O.A.C. oats under another name. They are good oats all right and in a way I don't know the States for getting them. I got some two years ago and last year they gave me a bumper crop. I had a piece of new land on which I sowed them and they did splendidly. I sold a lot for seed.

Weaning Time

Prof. W. B. Richards, N.D.A.C.

THERE seems to be a great difference of opinion concerning the proper time to wean pigs. Some practice letting them wean themselves, which is not a good practice. If hogs are raised for market in large numbers, sows of all tendencies will be used and it will prove most rational as a rule to wean the pigs when they are about eight to ten weeks old. As soon as they are taken away from their dams, run them in a grass lot until

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All cars completely equipped, including electric headlights. Equipment does not include speedometer.

other forage crops are ready. If they are weaned at this age they should be fed carefully. They will get along very well if skim milk is available. If not, they will not thrive as well. When skim milk is lacking, feed them a ration of two-thirds middlings and one-third ground oats, which has been soaked between meals. Feed the pigs three or four times a day for a few weeks after they are weaned. Barley and some soaked corn scattered on the ground for them to pick up can be fed from the time they are over two or three months old. The pigs should be castrated before they are weaned, and they recover from the operation more readily at this age than at any other. It is not a good practice to let pigs get over a month old before they are castrated.

Iceing Charges

THE Railways issued a new Tariff on April 11th, to become effective May 15th, increasing the charge for ice from \$2.50 per ton, thus making a charge for hauling the ice, based on the distance the car travels, ranging from \$2.60 per car for 150 miles or less, to \$10.90 per car for 1,450 miles. An appeal against this tariff was made in behalf of the fruit shippers, and on May 3rd the effective dates of the new tariffs were suspended until further notice. Therefore iceing charges in effect last season will at least stand until the proposed new charges are considered by the Railway Commission.

The Upward Look

Travel Thoughts, No. 35 Patience.

"STRENGTHENED with all might, according to His glorious power into all patience and long suffering with joyfulness." Col. 1: 12.

Through that long trip I had often feared that I would have no thrills left for the grandeur of our own Rockies, but as soon as I entered them, I knew there was no cause for this fear. The first stop was at Glacier. My joy was intense when I learned that I would eventually go on a glacier, one of God's wonder-precious. In Alaska I had enjoyed them from afar, now it was to be near.

All that long, hard walk, up, up, up, around and over boulders, I could see in different directions, scenery so close, winding down among the mountains. At last our goal was reached. A Swiss guide, axe in hand, guided tourists, cut steps when necessary, helped over our crevasses, and lady, led the way into a cave in the heart of the ice. Within was the wonderful blue-green coloring of the ice-bergs.

After emerging, lunch was taken within this glacier, eroded in the valley. Its surface was grand, with its mounds and hillocks, peaks and pinnacles, and crevasses, through which rushed the helving glacier streams. On all sides we could see the results accomplished by this tremendous mass of ice; the sides of the mountains swept bare, as through the ages, slowly, so slowly, imperceptibly but surely, it had gone on grinding, crushing beneath.

Patience was the lesson learned, as I sat looking at it. In the process nothing could be seen of what was being accomplished. Often our own dissatisfaction is the reason because we cannot see the results of our own work. But if we feel it is the work He has for us and do it daily in His spirit, we know results are being accomplished of which we can have no realization.

Glaciers move so little, so few fathoms or feet in the day, the week, the year! What we can accomplish in our lives, what we can do for Him, seems so pitifully small, yet it links of the untold results achieved by all honest conscientious striving! Then as God's glorious power is behind all that potential glacier action, so it is ours to glorify all our work, however trivial and insignificant.

Then to the sense of power was added that of beauty, the changing coloring of the ice, the sparkling white, the dark, the snow-covered peak of Mt. Donald towering above. So with the monotony and the sameness of my every-day work, comes the beauty of gladness and joy of every day.—I. H. N.

Light on Scriptural Prophecy

The Second Coming

MANY people believe that the Second Coming spoken of in the Scriptures was the destruction of Jerusalem, the destruction of the temple, and is completed at death. Is this borne out by the Scriptures?

This view is a common one, but if the Scriptures are to be taken as all literally, and not spiritualized, it cannot be maintained. That Christ did not come at Pentecost is shown by the fact that Paul, James, Peter and John, writing many years after Pentecost, were still looking forward to the Second Coming of Christ. Notice such passages as 1st Thessalonians 4: 15 to 17; James 5: 7; and many other simi-

lar passages. That Christ did not come in connection with the destruction of Jerusalem has been shown by the fact that such passages as Luke 21: 27; Acts 1: 11, and other similar passages, have not yet been fulfilled.

The same is true of the Second Coming of Christ. He has in fact already come (1st Corinthians 15: 26). At Christ's coming we are raised from the dead and about victory over death and the grave (1st Corinthians 15: 52, 54-55). He has promised us death except to be at rest in Paradise, but we are promised all things in the resurrection, when Jesus comes. Therefore, we had faint yearning for this resurrection (Philippians 3: 11). He did not want to be unclothed at death, but clothed upon at resurrection. As W. B. Blackstone says, "Let any one insert death in the passages which speak of Christ's coming, and he will see that it will not apply. For instance, 'For death shall come in the victory of his father.' Matthew 16: 27. 'When death shall sit on the throne of his glory.' Matthew 19: 28. 'Hereafter, shall ye see death sitting on the right hand of power and coming in the clouds of heaven.' Mark 16: 62. 'For our conversation is in heaven, from whence also we look for death,' Philippians 3: 20.

A Couple of Home-Made Labor Savers

Mrs. M. B. Macgregor, Reston, Ont.
If you have a helpful idea, pass it on. Having read "A Few Helpful Suggestions," some time ago in Farm and Dairy, I feel it in my duty to pass on one or two from my own experience.

The woman who cannot work all day without sitting down, will find a low table a great convenience. Mine is about 21 1/2 inches high and about the same in width and 2 feet 9 inches long. It should be the right height to allow one's knees to fit under it when sitting in a comfortable kitchen chair. To make this table secure four legs about one and one-half inches in diameter and shave one end of each down to one and one-quarter inches. Poles will fill the bill with the bark scraped off and smoothed with a wood file. Then take two square sticks about 4 x 4 inches and as long as your table is wide. With a hole can one-quarter inch auger a hole can be made about four inches from each end for the legs and the slant them so that the bottom of the leg will be straight with the side of the table. The legs should also slant slightly toward the end of the table.

Two pieces of inch board matched will make a suitable top for the table, by putting in two rows of nails, it helps to brace it considerably better. It can be used as a bench, as it can be painted to match the kitchen table, and when not in use, one can slide it under the kitchen table, out of the way. Such a convenient table can be used with all sorts of vegetables, washing dishes, ironing (if you can place it near the stove so that you can reach for a hot iron), cut out small garments and baste them up, or it can be used as a bench to stand on when house-cleaning time comes. Covered with a table cloth or a white oilcloth, it can be used for a children's dining table or play table.

Another great help is a portable clothes line. By its use you can hang and pin your clothes on the line in the house and so save many cold fingers in winter. It can be made like a saw horse by using four pieces of 1 x 4 inch lumber, each six feet long. About 18 inches from the top, bore an inch hole and fit in a strong piece of timber, round or square, not more than two inches in diameter and six feet long. A similar piece is required at each side, about 18 inches from the lower ends. Then, bore

gimlet holes and strong clothes line wire from one end to the other, about 12 inches apart, until you have about 72 feet of clothes line. A rope across each end will keep it from spreading apart too far and it can be lifted by these ropes when carrying out or into the house. After the clothes have had the benefit of the sun and frost to whiten them, the clothes line can be carried into the house, and in the morning the clothes will be smooth and dry enough to iron. This table and clothes-horse are two of the greatest labor-savers of which I know among home-made devices.

Brazil—Its People, Country and Happenings

HOW many of us are really familiar with that great South American Republic, Brazil, the population of which comprises several distinct elements, a million odd being aboriginal Indians? The wealth of this country, we are told, is fabulous; trade is great and growing, and altogether, Brazil is a progressive land. Some of the most interesting features in connection with Brazil are unfolded in Mr. J. D. McEwen's book, entitled "Brazil—A Description of People, Country and Happenings." Mr. McEwen labored in the country as a missionary for 14 years, and he writes as one from the inside of things Brazilian. Besides telling of his missionary experiences, Mr. McEwen informs his readers of the accomplishments of the nation in recent years. The various industries are described, the scenery is pictured, in fact, there is little about the book that Mr. McEwen does not touch upon.

It will be of interest to our folks to know that Mr. McEwen's boyhood days were spent on a farm in Gleanery Co., Ont., and that shortly after his graduation, he preached at Stouffville, near Toronto, for two or three years. His book, which is both interesting and instructive, may be secured through Farm and Dairy, for \$1.25.

A Novelty in Glass Baking Dishes

HAVE any of our women folk invested in one of the new glass baking dishes that are such a novelty at present? Whether these glass dishes add in any way to the quality of the food that is prepared in them, we are not prepared to say, but here are some of the reasons advanced for their use:

It is claimed that food, if baked in glass, can be served in the same dish in which it is cooked. This means that food can be brought to the table hot and that one does not need the purpose of two. Quite sound reasoning, isn't it? Another point is that we can watch whatever is being cooked. We will thus be in a position to know when the bottom is getting brown and avoid scorching. It is claimed, too, that glass baking dishes are easier to clean than metal ones.

Even if these glass baking dishes have no superior merits over those of other material, they should be interesting at least, and we would suggest that the woman who is contemplating a new purchase might do well to try one out.

The Never Organize

AVISITOR was being shown over a hospital and he asked the doctor, "Do you have any bother with the patients?" he asked. "Oh, yes, sometimes one of them will get troublesome." "What would you do if the whole lot got troublesome at once; if they organized a revolt?"

The warden smiled. "We haven't any fear of that," he said at once. "Lunatics never organize."

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NEW TRAIN SERVICE.
Toronto — London — Windsor — Detroit — Chicago, including Pacific Railway.

Effective Sunday, June 4th, the Canadian Pacific Railway will inaugurate three new trains, namely, "The Michigan Special" between Toronto, Detroit and Chicago; "The Queen City" between London and Toronto, and the "London Passenger" between Detroit and London.

"The Michigan Special" will leave Toronto 11:50 p.m. daily, Galt 2:15 a.m., Woodstock 3:50 a.m., London 4:43 a.m., Chatham, 7:00 a.m., arriving at Windsor (M.C.R. station) 8:30 a.m., Detroit (M.C.R. station) 7:50 a.m., Central Time, and Chicago (M.C.R. station) 3:30 p.m., Central Time. Note the convenient hour of departure, enabling passenger to spend the entire evening in Toronto, reaching Detroit at a most desirable hour in the morning. Equipment will be modern in every detail, including electric-lighted, standard sleeping cars, Toronto-Detroit, and Toronto-Chicago.

"The Queen City" will leave London at 8:00 a.m. daily, Woodstock 9:30 a.m., Galt 10:29 a.m., arriving Toronto 12:15 p.m.

"The London Passenger" will leave Detroit (Port Street Station) at 7:00 p.m. daily, Windsor (C.P.R. station) 7:40 p.m., Chatham 9:05 p.m., arriving at London at 10:50 p.m.

Particulars from Canadian Pacific Ticket agents, or W. B. Howard, District Passenger Agent, Toronto.

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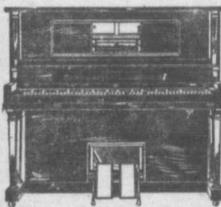
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God's Country and the Woman

(Continued from page 12.)

Her white face was pathetic as she turned away from him.

"You will not want to," she finished. "After that you will fight for me simply because you are a knight among men, and because you have promised. There will not even be the promise to bind you, for I release you from that."

Philip stood silent as she left him. He knew that to follow her and to force further conversation upon her after what she had said would be little less than brutal. She had given him to understand that from now on he was to hold himself toward her with greater restraint, and the blood flushed hot and uncomfortable into his face as he realized for the first time how he had overstepped the bounds.

All his life womanhood had been the most beautiful thing in the world to him. And now there was forced upon him the dread conviction that he had insulted it. He did not stop to argue that the overwhelming completeness of his love had excused him. What he thought of now was that he had found Josephine and had declared that love for her before he knew her name, and had followed it up by act and word which he now felt to be dishonourable. And yet, after all, would he have recalled what had happened if he could? He asked himself that question as he returned to help Jean.

And he found no answer to it until they were in their canoe again and headed up the lake, Josephine sitting by her back to him, her thick silks and broid falling in a sinuous and sunlit rope of red gold over her shoulders. Then he knew that he would not. Jean gave little rest that day, and by noon they had covered twenty miles of the lake-way. An hour for dinner, and they went on. At times Josephine used her paddle, and not once during the day did she sit with her face to Philip. Late in the afternoon they camped on a portage fifty miles from Adara House.

There were no stars or moon in the sky this night. The wind had changed, and came from the north. In it was the biting chill of the Arctic, and overhead was a gray, dense mass of racing cloud. A dozen times Jean turned his face anxiously from the fire into the north, and held wet fingers high over his head to see if in the air was that peculiar sting by which the forest man forecasts the approach of snow.

At last he said to Philip: "The wind will grow, Monsieur," and picked up his axe.

Philip followed with his own, and they piled about Josephine's tent a thick protection of spruce and cedar boughs. Then they broke up their three or four big logs to the fire. After that Philip went into their own tent, stripped off his outer garments, and buried himself in his sleeping bag. For a long time he lay awake and listened to the increasing wail of the wind in the tall spruce tops. It was not new to him. For months he had fallen asleep with the thunderous crash of ice and the scorching fury of storm in his ears. But to-night there was something in the sound which struck him all deeper into the gloom which he had found it impossible to throw off. At last he fell asleep.

(To be continued.)

This is an idea worth passing on to mothers of little girls. Invite the little girls to come and bring scissors. Each child is permitted to select from a colored fashion plate the dress she likes the best. Heads are cut from advertisements and pasted on to stiff card board. The cloth cuts out a doll and tissue paper and all sorts of odds and ends of lace are then given to them and they proceed to make a doll and dress it.

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The Momentous Question of Color

MENTION has been made in these articles on house decoration of the care that should be exercised in the selection of colors suited to the lighting of the room and the furniture, but there is another phase of color selection that is equally important—the matter of the intensity of the color, the aggressiveness of it, so to speak.

Once upon a time the writer went suite hunting, and came back fairly defeated by the greens and blues and yellows and pinks that had shouted back at her from the walls of one suite after another.

The difficulty for the amateur is to visualize the small sample of color as it will look when spread over a great expanse of wall. So when the color card is laid before her she pounces upon a nice bright bit of green or blue or pink, as the case may be, and says, without a moment's hesitation, "I'll have that." And "that," which was a gay little patch of color in a sample half an inch by an inch and a half, literally shrieks when laid onto several hundred square feet of wall space.

Taming of Boisterous Colors.
Some colors, such as green, tan and pink, can be tamed successfully by mixing with white, and thus subdued make very beautiful walls, and all but the very neutral shades require this treatment. The writer would be inclined to advise the amateur against using either blue or red on walls, as they require very skillful handling to make a successful room.

One of the most urgent matters then in the selection of a color is that it should be sufficiently soft and subdued, and not too dark in tone. Remember that color seems to gather depth and intensity as it increases in quality.

In using the flat plain wall finish it is necessary to take into account also the fact that on the ordinary plastered wall the effect of the color will not be softened by texture, as it would be if applied over a woven fabric such as burlap or on a rough finished plaster, which is another reason why colors should be much greyed before they are given the place of honor on our walls.

And what is true of the wall in respect of quietness of color is even more urgently the case in regard to the woodwork, which should blend very quietly and unobtrusively into the color scheme.

Green-Brown Woodwork

Coming then to the decorative scheme for House No. 7, which appeared in our issue of May 25, it will

needs be borne in mind that this is rather a pretentious house and will need a substantial and dignified treatment. The woodwork downstairs should be finished throughout with a weathered finish giving a brown color with a slightly greenish cast.

As the dining room is the central feature of this house, we will begin by tinting the walls of this room with olive green softened down with white until it is a rather dark greyish green and the ceiling deep cream. The brackets in the mantle should be a warm, reddish, light brown color, and the floor stained a light brown and covered with a rich deep brown carpet.

The inner curtains should be of cream seersiee or net, and the outside curtains of madras in a foliage pattern of greens and reddish browns with here and there a hint of gold.

As a proper dining room suite is the furniture most often wanting when the farmer moves from his old little house to his new big one, it should be possible to plan the furnishing of this room without regard to that which is on hand.

If the housewife is very enterprising she will order the dining suite from the factory unfinished, and have it stained with the same stain as is used on the woodwork. The furniture for this room might very well include also a couple of easy chairs, a couch and a desk, all finished to match the dining suite.

The hall and the living room, being not too well lighted, should be finished in a soft buff color, with green carrels blending in with the dining room wall, and the same over-curtains can be used with advantage in the living room as in the dining room. A couple of big upholstered easy chairs and a couch covered with tapestry or cretonne in soft shades of rose and green and brown, with one or two pretty willow chairs and a table and bookcase stained like the woodwork would make of this a very charming room.

Buff Color Reflects the Light.
The use of the same buff color as is applied to the front hall and living room will add brightness to the back bedroom, wash room and kitchen, for there is perhaps no other color, except clear yellow, which absorbs so little and reflects so much of the light that falls upon it.

Upstairs, the rooms being all well lighted, the householder has a choice of grey greens and grey blues and grey itself for the rooms on the sunny side and full rose and cream for the north and east rooms. The woodwork should be finished in white or cream enamel.

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A-36

Cuckoos

TWO species of cuckoo are common in the United States east of the Great Plains, the yellow-billed cuckoo (No. 22) and the black-billed cuckoo, and in the west a relative of the yellow-bill, the California cuckoo, ranges from Colorado and Texas to the Pacific coast. While the two species are quite distinct, the food habits of the yellow-bill and the black-bill do not greatly differ, and their economic status is practically the same.

Examination of 155 stomachs has shown that these species are much given to eating caterpillars, and, unlike most birds, do not reject those covered with hair. In fact, cuckoos eat so many hairy caterpillars that the hairs pierce the inner lining of the stomach and remain there, so that when the stomach is opened it appears to be lined with a thin coat of fur.

An examination of the stomachs of 46 black-billed cuckoos, taken during the summer months, showed the remains of 906 caterpillars, 44 beetles, 36 grasshoppers, 160 sawflies, 30 stinkbugs, and 75 spiders. In all probability more individuals than these were represented, but their remains were too badly broken for recognition. Most of the caterpillars were hairy, and many of them belong to a genus that lives in colonies and feeds on the leaves of trees, including the apple tree. One stomach was filled with larvae of a caterpillar belonging to the same genus as the tent caterpillar, and possibly to that species. Other larvae were those of large moths, for which the bird seems to have a special fondness. The beetles were for the most part click beetles and weevils, including a few May beetles. The sawflies were contained in two stomachs, one of which held no less than 60 in the larval stage.

Of the yellow-billed cuckoo, 109 stomachs (collected from May to October) were examined. They contained

1,865 caterpillars, 93 beetles, 242 grasshoppers, 27 sawflies, 69 bugs, 6 flies, and 86 spiders. As in the case of the black-billed cuckoo, most of the caterpillars belonged to hairy species, and many of them were of large size. One stomach contained 250 American tent caterpillars; another 217 fat webworms. The beetles were distributed among several families, all more or less harmful to agriculture. In the same stomach which contained the tent caterpillars were two Colorado potato beetles; in another were three goldenmith beetles, and remains of several other large beetles. Besides the



ordinary grasshoppers were several katydids and three crickets. The sawflies were in the larval stage, in which they resemble caterpillars so closely that they are commonly called false caterpillars by entomologists. The bugs consisted of stinkbugs and cicadas, or dog-day harvest flies, with the single exception of one wheel bug, which was the only useful insect eaten.

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

Pepsin Supplanting Rennet
A WISCONSIN cheese firm, in a letter to the Trade Bulletin, states there is a revolution in cheese making in that state, owing to the use of pepsin instead of rennet. It coagulates the milk better, it is of uniform strength, and the test of the whey shows that there is less butter fat and solids in the whey. The price of pepsin is very much cheaper. They have cheese on hand made with pepsin that are four to six weeks old, and the curing process seems to be identical. The factories are using about 3-4 to 1-2 ounce of pepsin dissolved in warm water at about 90 degrees temperature, then emptied into a bucket of water and put into the milk the same as they have always done with rennet. The use of pepsin will materially relieve the situation on the scarcity of rennet, in fact, they believe that in the future pepsin will be used instead of rennet.

Improving Cheese on the Island
THERE is considerable complaint in P. E. I. this spring that our cheese is not as good as it might be, and does not fetch the price in the market that it might or should. The cheese-makers are coming in for a good deal of the blame, as was shown by correspondence in the local papers this spring. The cheese-makers will have to do better this summer. There is now talk of licensing both factories and cheese-makers, and this would certainly be a good thing, as it tends to work out well in other places. In a letter received from Mr. Frank Herna, Secy. Dairymen's Association, Western Ontario, by Mr. Harvey Mitchell, Supt. Dairy Division, P. E.

June 8, 1916.

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| 15.34 | \$1.21 | 14.40 | \$1.15 |
| 15.06 | 1.27 | 14.40 | 1.15 |
| 15.17 | 1.21 1/2 | 14.20 | 1.10 |

As Mr. Mitchell states, "There should not be this difference of practically one cent per pound in average price in favor of the Western Ontario factories." Evidently our cheese-makers will have to wake up if the good name of P. E. I. cheese is to be maintained.—J. A. M., Kings Co., P. E. I.

Better Bodied Butter

By P. H. Kieffer.

THESE people who buy the higher grades of butter are people who are familiar with the quality of food. They appreciate butter that will resist rancid temperature and will hold its shape because it has a good body. The wants of the consumer should be closely studied by the producer, and when they desire butter of a particular texture, color or salt, the producer should immediately fall in with the suggestion as though he were an individual trying to increase his trade by catering to their demands.

The sooner that the small creameries which are receiving good raw material will awaken to this fact the better it will be for them. If we are going to accept this excessive overrun as one of the good qualities in buttermaking, and let it be recognized next to flavor, we it should then change the system of scoring, and instead of having the texture or body follow flavor, we should have overrun follow flavor, then to texture, color and package. This, to me, would be ridiculous, for the simple reason that the consumer does not want any more water and salt in the butter than is necessary and he wants a good body. He is the final judge and must be pleased.—Extract from Address.

Veterinary Department

Cow Gives Bloody Milk

I HAVE a two-year-old Ayrshire sister to a cow that gives bloody milk from one teat while the others are all right. She is apparently in good health as she is never sick and always gives her usual amount of milk.—S. C. W., Victoria Co.,

Give one ounce tincture of iron in a pint of cold water as a drench daily until blood ceases to appear. It is due to weakness or rupture of some of the small blood vessels of the udder. In most cases it yields to treatment, but is liable to recur without appreciable cause.

Abscesses, Etc

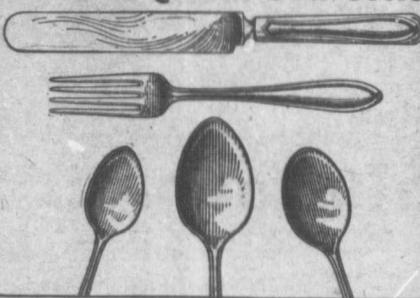
WE have a pure-bred Holstein cow, due to calve this month. In February, she had a lump come on her left side, just ahead of udder. It broke and discharged pus for a while, and when healed the lump still remained. I used a handkerchief saturated with cut full of holes over the lump, and it keeps it back, but the spot heats and gets sore. What can I do for it? It would be wise to breed her again or beef her if she puts through this time all right!

(2) I also have a splendid heifer, 15 months old, which comes in heat and I cannot get her with calf. I have bred her several times. She seems considerable blood each time when in heat, whether served or not. Her treatment should be given.—H. H. Gloucester Co., N.B.

(1) This is an abscess. It should be lanced freely and the cavity then flushed out three times daily until healed, with one of the coal tar antiseptics. There is no reason why she should not be bred again.

(2) When next in oestrus, oil hands and arms, insert hand through vulva and vagina until the fingers reach the neck of the womb. Then, with a rotary motion of the finger, dilate the passage into the womb until the finger will enter readily. In some cases the use of a special instrument by a veterinarian is necessary. Breed in an hour after operating.

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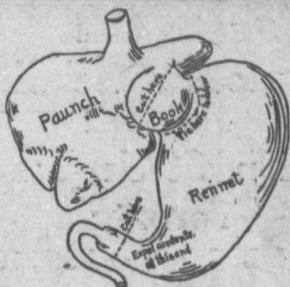
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The Tea Spoon is given for 10 coupons, or for 2 coupons and 10c.
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Premium Department (1385)
Peterborough, Ont.

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In Ontario, farms will respond to more cultivation. The great need, however, is better cultivation, and this can only be done through horse machinery. Large machinery is not adaptable to small tracts of land. We can only keep one team of horses on a 50-acre farm, while three horses with much heavier machinery will cultivate 100 acres more profitably. On the small farm, too, there is too great a proportion of the capital locked up in buildings. Larger farms are generally more profitable farms.—R. S. Leitch, O. A. C., Guelph.



Wanted---Calf Rennets

TO THE CANADIAN PUBLIC:

We are in the market for large quantities of Domestic Calf Rennets, prepared for shipment by blowing and drying or in the green state, cut open and packed in salt. Butchers and farmers will find it profitable to save the stomachs of all young calves slaughtered, and we will be pleased to hear from any party having a quantity of such goods to offer. Rennets are a non-poisonous by-product; there is no taint on them, and we pay freight charges on all shipments. We desire to give the most approved method of handling rennets in either the dry or salt form will be sent on request.

Yours truly,

CHR. HANSEN'S LABORATORY INC.

LITTLE FALLS, N.Y., U.S.A.

MANUFACTURERS OF

Chr. Hansen's Danish Rennet Extract, Danish Butter Color and Danish Cheese Color, Lactic Ferment Culture for Ripening Cream in Butter Making and Milk in Cheese Making; Rennet Tablets and Cheese Color Tablets for Farm Cheese Making.

Auto Tongue Truck on Deering and McCormick Binders SELF-STEERING FEATURE

The binder is purposely thrown out of square in this illustration in order to show clearly the steering action of the tongue truck wheels.

When the outer end of a binder platform starts to hang back, it pulls the tongue truck toward the grain.

Any movement of this tongue truck toward the grain turns the truck wheels in the opposite direction and at so great an angle that they automatically steer the binder back to its proper square cutting position, with the horses moving steadily straight ahead.

The truck wheels turn faster than the tongue as shown by the dotted lines.



A Gain Worth Making

WITH the new auto tongue truck, Deering and McCormick 8-foot binders cut a full 8-foot swath. That means a quicker, easier harvest—a saving of time when time is worth money. The driver's work is easier, too; on the straight-away because the horses are not crowded into the standing grain; and at the corners because the binder turns a natural square corner.

The wheels of this new auto tongue truck are fitted with removable dust proof bushings equipped with hard oil cups. This construction does away with the expense of buying a new wheel every time a bearing wears out.

The new auto tongue truck is only one of the important improvements on these binders. For instance, compare the wide, strong, deep-lugged steel main wheels with those on other machines; and compare also the arrangement for keeping canvases running true, which make them last so much longer.

Decidedly these are the binders to buy. See the I.H.C. local agent or write the nearest branch house for full information about their good features.

International Harvester Company of Canada, Ltd.

BRANCH HOUSES

At Brandon, Calgary, Edmonton, Estevan, Regina, Saskatoon, St. John, Winnipeg, Toronto, St. Catharines, Ottawa, Quebec, Repulse, Sarnia, Sudbourn, St. John, Winnipeg, Toronto

SYDNEY BASIC SLAG

The Fertilizer That Grows the Biggest Crops of Fall Wheat at the Lowest Cost

This advertisement is intended for Ontario farmers. If we could call on each one of you nothing would give us greater pleasure, but as this is impossible we want you to regard this advertisement as a personal message. If you use fertilizer we are sure you find some profitable, and we ask you to give Sydney Basic Slag a trial this year against what you have hitherto been using. If you won't do this, there must be a reason and we would like to know it. So important do we consider this that we will send our representative to see you if you let us have your name and address. Sydney Basic Slag costs \$20 per ton and will give you better results than other fertilizers costing much more money. Sydney Basic Slag was first introduced into Ontario in 1911, when 230 tons were sold. The consumption in 1914 was 2,106 tons. The best farmers in Ontario are using Sydney Basic Slag.

Interesting descriptive literature will be sent on application.

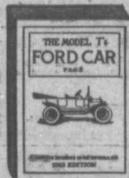
The Cross Fertilizer Co., Ltd.

SYDNEY, NOVA SCOTIA

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The book that answers all your questions and saves you dollars on your car is



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By

VICTOR W. PAGE

This is the most complete cloth bound book yet published on the Ford Car. A high grade cloth bound book, printed on the best paper, illustrated by specially made drawings and photographs. The construction is fully treated, and operating principles made clear to everyone. Every detail is treated and explained in a non-technical yet thorough manner. Nothing is left for you to guess at. The Ford owner, with this book at hand, has an infallible guide in making every repair that may be necessary. The book is written for Ford drivers and owners, by an expert who has driven and repaired Ford cars for a number of years. The illustrated chapter on overhauling and repairing alone is worth many times the price of the book. If you own a Ford you want this book. Write us for it tonight.

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FARM & DAIRY

Peterboro, Ont.