

FARM AND DAIRY & RURAL HOME



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BETTER FARMING
AND CANADIAN
COUNTRY LIFE



Toronto, Ont., September 27, 1917



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CITY MILK SUPPLY

Will Fight Producers Price

THE Toronto Retail Milk Dealers' Association met last week to discuss the recently advanced price of milk asked by the milk producers. The opinion of the meeting was that the retail milk interests are absolutely opposed to an increase in price, on the ground that it is not supported by war or crop conditions. No definite action, however, was decided upon.

Mr. R. W. Dockravy, who took a leading part in the meeting, stated that he was going into the country to purchase milk at the present price, and that he would refuse to pay the \$2.50 rate. If the farmers refused to sell their milk, he would turn his name over to the Food Controller, and ask for immediate assistance from that officer. He intended to communicate with other members of the association, he said, and suggest that they do the same thing.

Last January the producers announced their demand with a comparison of prices for fodder over the year previous, claiming that the farm crop had been a failure, and finally that the price must be paid or the farmers would go out of the business. Their case this year is on the same line.

Some retailers said that they had made no money this past summer, and were willing to continue at the present rate, but refused to pay the increased price.

A Later Report.

Indications as Farm and Dairy goes to press are that a compromise will be effected between producers and retailers. Mr. Dockravy went into the country but got no milk at \$2 a can. Mayor Church has discovered that the Producers' Association cannot be indicted as a combine in restraint of trade and that even the Food Controller cannot force farmers to produce milk if they do not want to.

Would Restrict Food Prices

THE following resolutions were considered and unanimously adopted by the Board of Controllers of the City of Toronto. They indicate the trend of city thought nowadays:

"That Sir Robert Borden be requested to widen the scope of the ration inquiry, or direct a new inquiry into bread, milk, fuel, ice, dairy, farm produce, and other necessities of life, with a view to preventing undue increase of prices, and preventing trusts, combines and restraints of trade.

"That the Food and Fuel Controllers be requested to fix prices for retail sales of commodities, and for an order requiring that no advance of increase shall be allowed in prices of fuel or food without first obtaining official sanction from the Fuel or Food Controllers, as the case may be."

Potato Prices to Be Set

A CHECK is to be put on the speculation in potatoes. The Food Controller announces steps to prevent inflation of prices.

From information obtained through the Fruit and Vegetables Committee, the Food Controller considers that in Toronto, Ottawa, Montreal and other centers in Ontario and Quebec, the price of Ontario and Quebec potatoes to the consumer should be about \$1.35 per bag of 90 lbs. There appears to be an ample supply now assured to

meet a largely increased consumption, which will doubtless follow a drop in prices.

The passing of an order to compel the sale of potatoes by weight only is under consideration. It is also proposed that no potato shall be graded which weighs less than three ounces, and is not free from scab and rot. A price of less than one and one-half cents a pound to the consumer, it is considered, should insure to the grower a reasonable return for his potatoes, and give to the wholesale and retail dealers a fair margin for handling.

Saskatchewan Rural Credits

THE Saskatchewan Government has announced the flotation of a loan to be offered to the people of Saskatchewan. It is known as the Saskatchewan Greater Production Loan. The object of this loan is to raise money within the Province to provide the necessary funds for the carrying out of the scheme of rural credits under the Farm Loans Act, the purpose being to supply money at cost to farmers requiring it for the development of their farms and the bringing about increased agriculture and live stock production in Saskatchewan.

The Farm Loans Act came into operation a few months ago, but it results a profitable loan from farmers for productive purposes have reached a total of more than \$2,500,000.

Ten-year Saskatchewan Greater Production Loan bonds will be issued in denominations of \$20, \$100, \$500 and \$1,000, bearing interest at five per cent. per annum, payable half-yearly. This is the first loan of its kind ever floated in Canada.

Judging Competition at Toronto

AN interesting feature of the Canadian National Exhibition this year was the judging competitions open to junior farmers. Following are the names of the leading five competitors in each of the judging classes, with the counts as from which they come, and their score:—

Grain and Roots: oats, wheat and potatoes: R. H. Crosby, York County, score, 271; G. E. Long, Wellington County, 257; W. W. Lord, Durham, 251; Chas. B. Boynton, York, 243; Wilber T. Reed, Simcoe, 241.

Swine—Berkshires and Yorkshires—Wm. Buchanan, Essex, 166; Russell Temple, Brant, 162; Chas. B. Boynton, York, 160; Geo. C. Jackson, York, 144; O. M. Lerch, Waterloo, 134.

Sheep—Leicesters and Shropshires—Wm. Chrysler, Wain, 176; Harry Jones, Oxford, 170; Wm. Thompson, Peterborough, 165; Leslie Clarkson, York, 163; Wallace Etavland, Norfolk, 161.

Beef Cattle—Angus and Short-horns—Thos. C. McHilton, 171; Frank Johnston, Ontario, 167; Loyal Lindsay, Haldimand, 162; F. M. Snyder, Waterloo, 161; W. Elgin Senn, Haldimand, 149.

Poultry—G. R. Wilson, Wellington, 242; Ernest Becker, Welland, 227; R. H. Crosby, York, 226; Arthur Crowhurst, Durham, 216; W. W. Lord, Durham, 211.

Heavy Horses—S. S. Staples, Durham, 187; Floyd Becker, Waterloo, 163; Geo. H. Whitmore, York, 160; Harry M. Hill, York, 159; L. Chapman, Durham, 156.

Dairy Cattle—Ayrshires and Holsteins—Thos. R. Maxwell, Peel, 365; Harry J. Seymour, Durham, 145; Miller McDonough, Wentworth, 141; Wm. Harris, Peterborough, 140; Ernest L. H. Waite, Peel, 134.

Fruit and Vegetables—Elmer Beamer, Welland, 648; Harry Daboll, Welland, 580; Irwin McMahon, Simcoe, 573; Bruce Wilson, Norfolk, 571; Harry Young, Bruce, 511.

Fertilizers for Use in Spring 1918

Farmers who used Sydney Basic Slag will remember that on account of the impossibility of securing transportation we were not able to make any deliveries last spring. Conditions are not likely to be better in the early months of 1918, in fact they will probably be worse. The Railway authorities and those responsible for increased production are urging us therefore to fill the requirements of our buyers before the end of December. We ask Ontario farmers who are using our goods to help out by placing their orders with our agents right away and taking delivery on car on arrival even at some inconvenience to themselves.

LET US ALL DO OUR BEST IN HELPING TO WIN THE WAR.

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FARM AND DAIRY & RURAL HOME



We Welcome Practical Progressive Ideas.

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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. XXXVI

TORONTO, ONT., SEPTEMBER 27, 1917

No. 39

The Truth About Sweet Clover as a Farm Crop

With Five Years Experience and 100 Acres in the Crop, Mr. G. A. Brodie is an Advocate of Sweet Clover

By F. E. ELLIS.

AT the recent Canadian National Exhibition a group of farmers who had gathered in one of the dairy cattle barns, got into a somewhat heated discussion as to the merits of sweet clover as a farm crop. The most of the disputants held strong opinions pro and con, but were decidedly short on experience. "Well, I am going to follow Dr. Maite up at Ottawa," said one decidedly. "He says that sweet clover is a dangerous weed, and I guess he should know. I am not going to fool with the crop."

"Have you ever grown it?" asked group's chief advocate of sweet clover.

"No," admitted Speaker No. 1.

"Well, I have grown a little and I know that so far it is good."

Then the Halton county man spoke up. "Their experience up at Guelph isn't very satisfactory," said he. "Mr. Whiteside, the foreman of Prof. Zavitz's experimental plots, you know, tells me that he is in somewhat of a quandary to form an opinion on sweet clover. The crop grows all right with him, but according to Mr. Whiteside's story it is almost impossible to cut it without killing the plants. At Guelph this spring they cut different crops of sweet clover at different dates and at different heights, and all of it is so dead now that any plant can be lifted out by the roots with two fingers."

"Perhaps they didn't have the right variety of clover," suggested the sweet clover advocate.

"I asked Mr. Whiteside about that," replied the Halton county man, "and he assured me that they had several varieties, both white and yellow, and that all had been killed in cutting." Then he closed with a very practical suggestion intended principally for the writer as the only representative of the farm press on hand. "Why can't our farm papers give us some real leading on this question?" he said. "Surely there are farmers in the province with experience enough to give a definite answer to the question, 'Is sweet clover a desirable farm crop?'"

Information is Lacking.

I mention this discussion on the fair grounds at Toronto because it is so representative of many discussions regarding sweet clover that I have heard in all parts of the province. Everywhere farmers are interested in the new crop, and everywhere there is the same lack of information as to its real value. Some farmers have grown sweet clover and condemned it. Others, after one or two years' experience, speak of the crop in terms of highest praise. Our agricultural colleges and experimental farms, however, to which we have been accustomed to look for leading when such problems arise, have sounded a very uncertain note. At first the tendency was to utterly condemn the crop. Later, when the public demand for further information made fuller investigations necessary, our public investigators became less

decided in their condemnation of sweet clover. They admitted that cattle would eat it, even that they seemed to like it, although formerly they had pronounced it as distasteful to all kinds of farm stock. Even yet, however, our agricultural authorities have not spoken with any clear voice on the matter. A week or so ago, therefore, when I had an opportunity of visiting one of the most extensive growers of sweet clover in Ontario, along with J. W. Sangster, a York county farmer, and a couple of other agricultural journalists like myself, I was quick to signify my intention of going along. We spent the day with Mr. G. A. Brodie on his farm at Newmarket, 28 miles north of Toronto, and from Mr. Brodie we learned much of the value of sweet clover. But before we tell of Mr. Brodie's experiences with sweet clover it will be well to introduce Mr. Brodie himself—if he needs an introduction.

Mr. Brodie is a gold medalist graduate of the Ontario Agricultural College. He left that institution about the year 1890, and the fact that he carried away the gold medal is all the proof that is needed that he was the best man in his year. Unlike the majority of agricultural graduates who leave the college with honors, however, Mr. Brodie did not accept an official position, but went back to the farm. Since then he has made a name for himself as an importer and breeder of Clydesdale horses, Shorthorn cattle and Shetland ponies. Perhaps he did his best work as a grower of select varieties of seed grains and of Grimm's

and Ontario Variegated alfalfa. When the good farms competitions were instituted in the province, Mr. Brodie entered his farm, and on it secured a gold medal. He is not a plunger, but a safe, conservative farmer who experiments carefully before going extensively into any crop. Five years ago he began to experiment with sweet clover. Each year he has enlarged his acreage until now he has 100 acres of sweet clover scattered over his three farms. His testimony, therefore, is of value to all who are considering sweet clover as a farm crop.

Sweet Clover as a Pasture Crop.

We found Mr. Brodie mounted on the corn binder, cutting a crop that should yield 18 to 20 tons of green corn to the acre. It was one of the best crops of corn we have seen this year. "Way are you such a strong advocate of yellow sweet clover?" we asked Mr. Brodie when the corn binder had been turned over to the hired man.

"Come, and I will show you," said the gold medal farmer, as he led the way down the lane to where a herd of 25 or more dairy Shorthorns were pasturing. "In that pasture field," said he, "there are 22 acres, all of it in sweet clover, seeded a year ago last spring. We have had 25 head of cattle, practically all mature, pasturing it through the whole season. You will notice that they have the run of some good natural pasture as well. Pasturing on the sweet clover, they will produce more milk than on any other kind of pasture with which we have had experience. Here is an instance: One bunch of cows was producing four cans of milk on sweet clover pasture. We turned them from the sweet clover on to the very best of natural grass pasture, which is supposed everywhere to be the very best pasture for milk production. Instead of increasing their flow, however, this bunch of cows had in three days decreased from four to three cans of milk and stayed at the three cans. We turned them back to the sweet clover, and in another three days we were again getting our four cans of milk."

"Yes, this pasture does look rather hard and barren now," replied Mr. Brodie in answer to a question, "but right up to the present the cows have had all they could eat from it. Even yet there is quite a bit of plecting on it. From this date forward, however, I believe, sweet clover pasture will have to be supplemented."

Nearer the buildings, Mr. Brodie had a small field of nine acres, also in sweet clover, seeded a year ago last spring. He has had 12 head of young cattle running on this nine acres all summer, except for one week in June, when they were taken off to enable Mr. Brodie to cut a very good crop of hay from the field. The cattle, when we saw them, were in prime condition. Still further justification for their owner's belief that sweet clover is the best of all pasture crops. "It has

The Truth About Sweet Clover

Is sweet clover deserving of an important place among the farm crops of Canada? Here is a question on which authorities differ. Practical farmers are as far from reaching any unanimous conclusion as are our agricultural advisers. Some regard the crop as a weed. Others are outspoken in their belief that it is of the most valuable of the clovers. How are these conflicting statements to be reconciled?

Only by the acid test of experience can the value of sweet clover be determined. In this issue of Farm and Dairy the experience of Mr. G. A. Brodie is reviewed. Hundreds of others of Our Folks have had more or less experience with the crop. Why not write Farm and Dairy your impressions as to the value of the sweet clover? We would like to know and your experience would be of value to thousands of our readers who are open for more information on the subject. We would all like to know the truth about sweet clover.

the further advantage," remarked Mr. Brodie, "in that nothing will blow on it."

As Hay for Winter Feeding.

"You have fed sweet clover hay in the stable in winter?" someone queried.

"Yes, we have had sweet clover hay to feed for some years now. With our cows we have found that if we take them off sweet clover and substitute even alfalfa hay, that they will go off in their milk. The horses and young stock both like it very greedily. We have grown alfalfa for some 35 years, and from our experience with both crops for hay, we consider the sweet clover fully the equal of the alfalfa."

This year Mr. Brodie cut 45 acres for seed, which he expects will yield about 10 bushels to the acre. A great deal of the crop also was cut for hay. We stopped at the barn to have a look at it. Like most other growers this season, wet weather interfered with harvest at the proper time, and a considerable part of the clover was in blossom, and in some of it the seed had started to form before Mr. Brodie got after it with the mower. "This hay," said he, "was cut fully a month too late. It seems coarse, but the cattle will eat every bit of it and thrive on it. If alfalfa were left so long, it would be so woody that much of it would be wasted."

We stopped to look at a 25-acre field that had been seeded to sweet clover with oats this spring. The stand was excellent, and would have looked even better had Mr. Brodie not pastured it in moderation since the grain crop was removed. "I have had it a foot high at this time," said he, "when the cattle were kept off. In this particular field the sweet clover was above the bands in the sheaves, and we had difficulty in getting them dry enough for threshing. At present I am feeding the sheaves to the horses, and they lick it all up clean. We seeded at the rate of 20 lbs. of seed to the acre."

"What is the average yield of alfalfa hay per acre?" I asked.

"We cut two to two and one-half tons to the acre this year," was the reply.

"Why does pasturing sweet clover not kill it as does mowing too close?" was the next question.

"We have found," said Mr. Brodie, "that the cattle do not eat the sweet clover off close to the ground as they do some crops. The tendency is more to browse off the tops."

"Likewise," supplemented Mr. Sangster, "the cattle don't eat off all the leaves as a mower does." "When I first started to grow sweet clover," remarked Mr. Brodie later, "I knew nothing about the crop, and took no precautions in cutting it. My mower was without shoes and cut right down to the last inch. I had over a ton of clover the second cutting, and got five bushels of seed to the acre. Sweet clover, therefore, is not so easily killed in cutting as some would have us believe. I don't advocate cutting it in this way, however. My cutter bar now has shoes, so that I can leave several inches of stubble. There is also a proper time to cut sweet clover, and that is early in June before the crop has blossomed at all."

As a Soil Improver.

Many who question the value of sweet clover as a general farm crop admit that it might fill a useful place in improving worn out soil. Mr. Brodie was most emphatic on this point. "I can take the poorest field on the farm," said he, "grow yellow sweet clover on it, and, after it, grow any crop on earth." Then he proceeded to follow up his assertions with a demonstration. We went to inspect another field of sweet clover on the farm. This field had been fall plowed from an old sod and the soil in the field had previously been known to death. "This spring the soil was

worked and seeded to sweet clover, along with oats. The stand of sweet clover was perfect. "We will have a bumper crop of sweet clover here next year," said Mr. Brodie, "and after that we can grow anything."

We pulled out the small sweet clover plants and found the roots covered with small nitrogen gath-

ering nodules. The roots themselves were about 10 inches long and this from spring seeded clover. "Did you ever see so many nodules on an alfalfa root when pulled up in this manner?" asked Mr. Brodie. We admitted that we had not, and it was easy to understand after pulling many plants and (Continued on page 8.)

Efficiency a Solution of the Farm Labor Problem

How to Make Expensive Labor Pay for Itself

THE farm labor problem this year was a severe test of the managing ability of Canadian farmers. With inexperienced labor demanding \$2.50 to \$4 a day, the farmer must indeed be a manager who can handle this labor in such a manner that the work done will pay the wages. If a farm is efficiently managed the shock of the high wages will be passed on to the increased receipts from good crops marketed at good prices. But a labor scarcity hits the inefficient manager

to cut down the cost of the driver's wages in proportion to the amount hauled. If two horses find it too hard to haul this extra large load, the farmer will probably find it to his advantage to use three horses in here as he has already found it in using three horses or more on the disk.

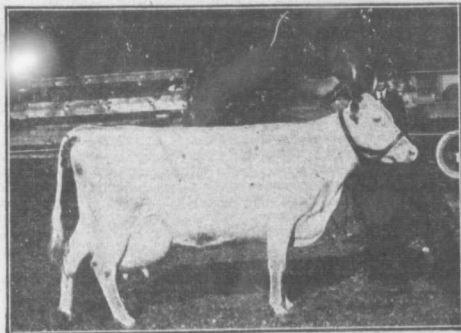
Not only should the farm in general be made handier, but the buildings themselves should receive careful consideration in this regard. The time spent in doing the chores morning, noon and

night takes up a considerable proportion of the day. Every hour saved in this part of the day's operations means so much more to be applied on the outside farm work. And it is this extra time which will earn the extra high wages paid to the hired man. The windmill, or gasoline engine should take the place of the hired man wherever possible. It is usually not profitable to pay a man wages to pump water or turn the handle of the cream separator when other power may be used for these purposes. Farmers will find it to their advantage to make greater use of the telephone and of the parcel post, if he is on a rural mail route, in obtaining small repairs and other useful things and saving trips to town.

The farmer must use his own judgment in the distribution of the labor at his disposal. When he considers that his hired man is receiving a pretty big price for a day's work, he will see that it will not pay to ret him at such work as picking potatoes, or picking fruit when school children may be obtained on Saturdays, who could very well do this sort of work. The hired man should instead be placed after as many horses as the farmer can afford to give him. One of the chief ways of saving labor is in doing work at the proper time. This applies with great force to weeding. It will take but a small proportion of the effort if weeds are killed in sprouting.

One of the most successful farmers, in his employment of labor, makes it a practice to carry with him all the time a memo book. In this book he jots down from time to time the different articles that may be required from town in repairing machinery, or for other things. Then when he makes a trip to town, it is a real shopping trip. In this book he also jots down a list of jobs to be done on stormy days. In this manner he always has plenty of employment for his labor on rainy days, and on the bright days, when these jobs would have to be done on some farms, his labor is ready to go right on with the general farm work.

Following is a list taken from his memorandum book of jobs for stormy days: Clean barn; sweep down cowbarns in cow barn (four times a year); set horses' shoes; get machinery ready to use (about one month before each operation starts so as to have time to make any repairs necessary); replace broken lights in buildings (in fall); clean grain (long before needed); oil wagons and carriages; repair machinery; sharpen all tools; clean cellar (twice a year); mix feed; mix fertilizers; oil harness; sharpen knives; clean milkhouse.



A Bovine Beauty of the London Show Ring.

Mountain Lass won in the milk class at London for A. S. Turner & Sons. Later she was made female grand champion. As the illustration shows, she is almost a perfect specimen of an Ayrshire and a dairy cow.

—Photo by an editor of Farm and Dairy.

a knockout blow, and labor conditions, with the advent of conscription as a law of the land, do not look any brighter for next year.

Efficiency on the farm means a continual looking ahead; it means planning to have every operation carried out at the right time; it means using gasoline and horse flesh to replace expensive man power; it means large machinery, handy buildings and a conveniently laid out farm; it means that every hour of work paid for at high wages is spent where it will do the most good, and that the leisure hours of the hired man fall on Sundays rather than on rainy days.

In planning to meet the difficulties brought on by the labor scarcity, the farm itself should first receive the consideration of the farmer. The fields should be large enough that time may be saved in turning at the ends of the fields. More horses should replace the man power which now costs so much. The general purpose team which is so frequently found on the farm is a labor waster. To do the work cheaply, heavier horses should be used; the two-furrow plow should replace the one furrow; the 16-foot drag harrow should be common, and the disk should be sunk deeper.

One of the machines that too often does not receive its full share of the farmer's consideration is the wagon used for hauling farm produce to market. In many cases the wagon box could afford to be several feet longer than it is, and perhaps a little wider. Larger loads should be hauled

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Best Feeds for Alberta Dairy Cows

Suggestions for the Dairymen of the Foothills

S. G. CARLYLE, Supt. Demonstration Farms, Edmonton, Alberta.

TO get the best results, dairy cows should not only be fed protein and carbohydrates in the right proportion, but these feeds should be palatable, digestible and bulky, and as succulent as it is possible to get them. The cow also relishes and does better on a variety of feeds. The problem confronting the dairymen in this province is to supply the variety and succulence through the long winter months.

The feeds that are generally used by the dairymen in this province, after the cows are stabled, are for roughage—green feed or oats cut before they have matured, prairie hay, and in some parts timothy hay. For concentrates—ground oats, barley, frozen wheat, bran, and flax or oil cake; and some are provident enough to grow a few roots to supply succulence.

Roughage.

Our roughage feeds are high in carbohydrates, and low in protein—green feed having about nine pounds protein out of every 100 pounds, prairie hay six pounds, and timothy hay five and a half pounds; but of this amount only about half of this protein is digestible. If alfalfa can be grown, as I believe it can, over the greater part of Alberta, it will do much to balance the rough feeds. Alfalfa contains about 14 pounds protein out of every 100 pounds, and of which 10 pounds is digestible.

But if we are to get the best results some concentrates must be fed, because a cow cannot consume enough of the rough feeds to produce a large amount of milk, and she will not get the variety to stimulate her appetite. The concentrates grown in this country are fortunately high in digestible protein besides being very palatable.

Oats a Splendid Feed.

Oats is one of the most largely grown crops in the west, and is one of the best feeds for any kind of stock, and is especially good for the dairy cow. It is bulky and palatable, and though containing a larger per centage of indigestible material than the other grains, owing to the heavy hull, it also contains a larger percentage of digestible protein and fat, and has a nutritive ratio of 1 to 6, which, according to chemical analysis, is almost a balanced ration. Oats are especially beneficial in fitting cows after they are dry for next year's work; and this is where many dairymen fail in not getting cows in good condition before freshening. As soon as a cow dries she should be fed liberally on feeds high in protein and fat, such as oats, bran, and oil meal, to store up future energy

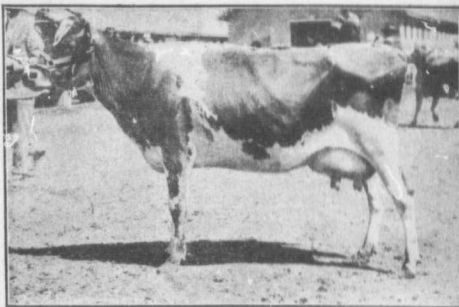
for herself, and also to develop the unborn calf.

Another feed largely grown in this western country, and which should command more attention by the dairymen is barley. Barley, according to analysis, is very similar to corn, and for this reason forms a large part of the fattening hog's ration in this country. However, it can be fed very profitably to dairy cows, but should only be fed in limited quantities, because, like corn and other heavy, compact feeds lacking bulk, it is harder to regurgitate for remastication, consequently it is not well mixed with the saliva. The ptyalin contained in the saliva acts upon the starch changing it into sugar and leaving it in condition so that the other digestive juices can further work upon it. Barley adds variety and is very valuable ground and mixed with more bulky feeds, as ground oats and bran. It is highly digestible, containing 75 per cent. digestible nutrients against 66 per cent. in oats. It is lower in protein and fat, but higher in carbohydrates.

Wheat for Dairy Cows.

Wheat is valuable for feed for dairy cows, but on account of the high value placed upon it for human food, is not much used. Shrunken and frozen wheat is plentiful some seasons and can therefore be profitably utilized. Wheat is equal pound for pound to barley, and should occupy the same place in the ration. But the great value of wheat for feeding purposes is in its by-products, of which bran is the most important to the dairymen. Bran is not so highly digestible as some of the other feeds, but is extremely valuable for its physical nature, being bulky, palatable, and has a cooling effect on the digestive system. It also has a laxative effect, owing to a large amount of phosphorus or mineral matter present. It contains only 56 per cent. digestible nutrients and would be an expensive feed were it not for the reasons already mentioned. However, it is high in digestible protein, containing 12 per cent.

Another feed worthy of mention is flax, but on account of containing a large percentage of oil is rather expensive. Like wheat its chief value as a dairy feed is in its by-products, the chief of which is oil meal. This feed also has a high physical value, especially when animals are fed on dry feeds, in keeping the digestive apparatus in healthy working condition. It is highly digestible and contains a larger amount of protein and fat than any of the feeds spoken of. It contains about 30 per cent. protein and six per cent. fat, and for this



A Milky Little Jersey, First in Her Class at Toronto.

Balch's Brightness was first at Toronto in the class for two-year-old heifers in milk. Her leading characteristic is her very milky appearance. At London she went down to second place, a heifer of more substance being given the preference. She was exhibited by Jno. Pringle of London.

—Photo by an editor of Farm and Dairy.

reason should only be fed in small quantities in conjunction with bulky feeds.

Rye is another feed grown extensively in the West, and has a high value for fattening hogs. It is carbonaceous in character and is palatable, but its chief objection in the dairy ration is the disagreeable flavor it imparts to milk and the bitter taste it develops in butter, if fed in any considerable quantity. The danger from it is the likelihood of ergot being present, which causes abortion. The best way to use it for dairy cows is to sow it for pasture in the month of July, when it will be ready to turn the stock on the middle of August or first of September, thus supplying green, succulent feed when the other grasses are dried up. It also comes on early in the spring, and can be pastured up to June, the cattle taken off when the rye starts heading out to escape the effect of ergot which may be present. The rye can then be left either for grain or to be plowed down.

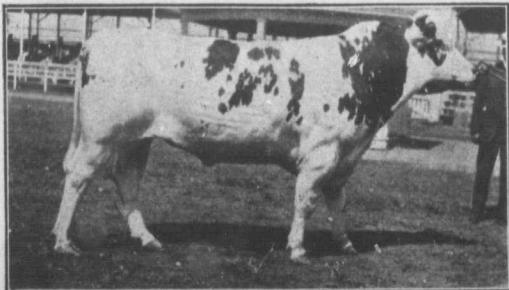
Succulent Feeds.

The greatest drawback to winter dairying in the west up to the present is the absence of succulent feed. Roots can be grown in large quantities in every part of the province, but the chief objection is the cost of labor in handling them. Corn has proved a success in some parts of the province, and already silos have been built, thus solving the problem in these sections, and more will be grown every year.

Winter Feeds.

The most common feed for Alberta for stock during the winter months is green feed or oats cut before being matured. This makes excellent fodder, but it may be greatly improved by sowing with the oats a bushel of peas per acre. The peas and oats together make a better balanced ration, the peas being rich in protein. This makes excellent feed when the oats are cut in the dough stage, shocked, stacked and fed throughout the winter, and a still better feed when put in a silo as soon as cut and fed as ensilage. This has been tried on two of our demonstration farms, and the ensilage found very satisfactory.

In regard to the order in which the different crops should be threshed, much will depend on circumstances, and each farmer can readily see what arrangements would best suit him. The main point to consider is that oats and barley are practically impossible to separate in a fanning-mill. Therefore, if one of these crops were threshed immediately after the other, the second would be sure to be more or less contaminated by the first. Peas and flax being particularly easy to separate from the common cereals are very desirable crops to thresh between two different lots of ordinary grain.



The Winning Two-year-old Holstein Bull at Toronto.

Plus Inka Artia is one of the big, deep bodied kind that is always popular in the show ring. He was exhibited by S. Lemon & Son of London.

—Photo by an editor of Farm and Dairy.

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Champion Spark Plug Co.
of Canada, Limited, Windsor, Ontario. 23



A Three-Wheel Tractor in Operation at the Demonstration.

The Tractor Demonstration at North Toronto

Almost Fifty Tractors in Operation with Twenty-Three Companies Represented.
The Most of Them do Good Work. Attendance Comparatively Small. By F. E. Ellis

THE civic jail farm, north of Toronto, was the scene, from Tuesday to Friday of last week, of the greatest tractor demonstration yet held in Canada. Altogether 50 tractors were seen in operation, representing the tractor products of 23 different manufacturers. A couple were made in Canada; the rest came from the United States. The weather was favorable, but the attendance was not such as the importance of the event merited. On Wednesday there were over 1,000 visitors on the grounds, but on other days attendance was small. The crowd was, however, representative of a large section of the country. Almost all of the good agricultural counties of Ontario were represented, and visitors were noticed from a couple of other provinces as well. Most of the visitors, however, came in automobiles. "Just the class of people we want," remarked one salesman. "The men who can afford a car can better afford a tractor."

And it was an interested crowd. "I am not sure," said a well known York County farmer, "that the tractor will plow more cheaply than a four-horse team, but it would probably plow faster and help me to get my work done at the right time." Others expressed similar sentiments and all united in denouncing a tariff duty that made every machine on exhibition cost several hundred dollars more in Canada than the same machine sells for in the United States. Representatives of several big tractor firms stated that the tariff alone stood in the way of a big development of the business in Canada.

Small Tractors Popular.

The tendency toward the small tractor was noticeable. Three years ago, at the first demonstration of the kind in Ontario, the largest machine was pulling a twelve bottom plow; and 14-inch bottoms at that. The largest

tractor operating at Toronto last week pulled only four plows and they were 12-inch bottoms, the majority had a capacity of only two or three plows. "I am not sure but that we are getting to the other extreme," said Prof. W. H. Day. "I myself believe that we will ultimately come to favor a medium sized tractor, say one that pulls a four gang plow." The greatest interest was shown, however, in the 8-16 or 10-20 tractors. A tractor of this size will pull two plows under all conditions, three plows under favorable conditions and do all of the belt work ever needed on a farm. Emphasis must be placed on the belt power; no tractor will ever be in great demand that cannot be used as an all round farm power. There is a growing belief, too, that the 12-inch bottoms are too wide for soil conditions in Eastern Canada, and many 10-inch bottoms were seen for the first time at this year's demonstration.

Standardization Needed.

A feature that proved confusing to all prospective tractor purchasers was the great variety of types. Tractors have yet to be standardized. It reminded us of the early days of the automobile when every different make of car had a style of its own. Now the auto has been standardized and all cars have their outstanding characteristics in common. Not so the farm tractor. There were tractors with two wheels, three wheels, four wheels, caterpillars with no wheels and one a combination of caterpillar and wheel tread. There were engines in these tractors with upright and horizontal cylinders and anywhere from one to eight cylinders in the power plant. Some had a chain drive; others a direct connection with the inside rim of the wheels. Two or three had friction clutches; the rest were positive. The oiling and cooling systems pre-

(Continued on page 18.)

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“Will they let Famine Fight Against Us”

To us who stay at home, good meals, eaten in comfort, are a commonplace.

But to our Sons, Husbands and Fathers “out there” food is the only thing that matters. The possible lack of food forever haunts them. For without food, how can they “carry on.”

From whence shall come their bodily strength.

Realizing these things—how dare we fail to send them the foods they so sorely need?

How can we refuse to eat a little less

white bread, beef and bacon so that there will be enough of these non-perishable foods *for them*.

Shall we let famine, also, fight against them? Or with these facts before them will the great legion of Canadian Women live up to their Food Service Pledges.

The answer lies with each one of you.

The Judgment of Mankind will write an outcast verdict upon those who do not sign and live up to the Food Service Pledge.

Sign the Food Service Pledge before it is Too Late

Woman's Auxiliary, Organization of Resources Committee, in Cooperation with The Hon. W. J. Hanna, Food Controller.

The Truth About Sweet Clover

(Continued from page 3.)

finding them all covered with nodules. Just why the crop adds so much to the fertility of the field in which it is grown.

"Can You Get Rid of It?"

There was still one point to be settled. "How about this weed menace?" we asked Mr. Brodie. "Once it gets into the soil, can you get rid of it?"

Again the answer was based on experience. "That corn field over there was plowed from a sweet clover sod. You will find very little sweet clover in it. If, however, am not going to make a strenuous endeavor to kill out the sweet clover. A little of it through the crops would be a grand thing. It would add to the feeding value of the crops, and also, with that great nodule covered root, it would feed the soil and the crop. You know that many seed red clover,

along with all their grain crops in order to feed the soil. If sweet clover could be gotten into the soil, so that it would come up with all crops, it would take the place of the red clover seeding."

Mr. Brodie mentioned further, the fact that sweet clover has an advantage over alfalfa, in that being a biennial, it works in with a short rotation of crops. "Sometimes," I suggested, "that would be a disadvantage, as sometimes you might not want to re-seed every year."

"I believe," replied Mr. Brodie, "that where sweet clover is pastured, not too closely, that it will re-seed itself and come along year after year. On that pasture field that we first visited, I believe enough seed has been formed this year to re-seed the piece. At least I fully expect to pasture sweet clover there again next year."

Mr. Brodie is growing a specially

selected strain of yellow clover, known as albotrea. It has a finer stoo, and is just as leafy as the white clover commonly advocated, and has an advantage over the latter in that it is easier to cure. It is well to mention here, however, that many strains of yellow sweet clover are worthless as a farm crop, and where one is not certain of the strain of yellow sweet clover that can be gotten, it would be better to stay with the white clover sold by the seedsmen. One of Mr. Brodie's neighbors, Mr. A. G. Gormley, is the originator of this albotrea strain, and he too, has grown as much as 100 acres in a season. He too is just as strong an advocate of sweet clover as his neighbor, Mr. Brodie, but time did not permit of our visiting his farm. Mr. Brodie's testimony alone, and the story of his experience with sweet clover, was sufficient to convince all of us that the crop is due to take a prominent place

among the farm crops of the province of Ontario. Probably hundreds of Our Folks have already experimented with sweet clover, on a limited scale, at least, and we would be glad to hear from them and publish their experiences in Farm and Dairy. Let us have a sweet clover experience meeting.



Buckwheat Screenings for Poultry

A CAR of this feed was purchased by the Poultry Division, Central Experimental Farm, Ottawa, through the superintendent of the Government Terminal Elevators, Port William. The car contained 20 tons, costing \$30 f.o.b. Fort William and \$35 per ton f.o.b. Ottawa—\$1.75 per cwt. Of this, 15 tons were whole and five tons ground fine.

On receipt, it was fed to all classes of poultry, old and young, the grain in hoppers, and the mash in hoppers or in moist mash. The birds after eating a corn and wheat diet did not take to the whole screenings for several feeds, but the mash was readily taken from the start. When the grain was fed in large quantities, the wheat was picked out, and a little care had to be taken in order to have them eat everything up clean. Now after three weeks feeding, everything is eaten up, except a few oat hulls.

A test was made on 300 pullets from two to four months of age. In 20 days they ate 516 lbs. of grain and 204.5 lbs. of mash. The total gain was 152.6 lbs., that is, it took 4.7 lbs. of the feed to make one pound of gain at a cost of 8.2 cents.

Dr. Shutt, Dominion Chemist, has submitted an analysis of this product from which we quote the following information: "This product, it will be seen, consists approximately of 50% wheat, 40% wild buckwheat, 2.5% light oats, 1% fax seed, one-half of 1% we d seeds, 5.7% chaff, hulls, etc. The chemical analysis of the ground mash is: Water, 14.07; protein, 11.84; fat, 2.07; carbohydrates, 64.53; fibre, 5.35; ash, 2.13—109.90."

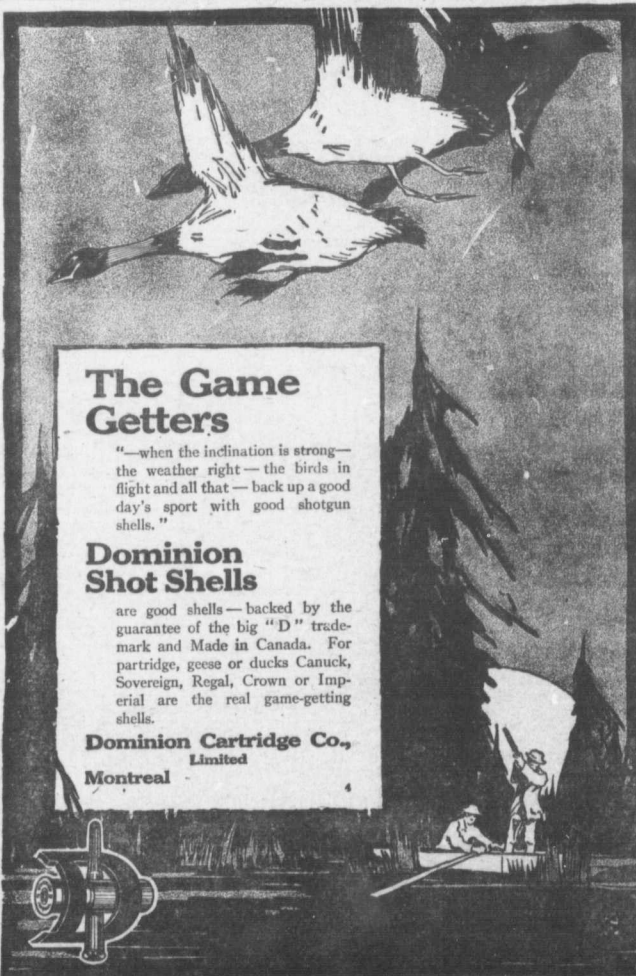
The above prices were for a car lot, and prices for smaller quantities would likely be considerably higher. It is suggested that a number of poultry or swine breeders in a locality club together to order a car. It is a good purchase at a figure near the above price.

Don't Crowd Growing Pullets

By A. P. Marshall.

GROWING pullets often receive a set back on account of close, crowded quarters. Unless careful watch is kept over them the poultry raiser may fail to realize that the birds have outgrown their quarters until harm has been done. Young chicks grow rapidly after they are put into the colony house or henhouse and soon become so large that they seriously crowd one another, especially at night. Before this condition is reached some of them should be removed to other quarters. If no other place can be made available it is better to dispose of some of the chicks together to order a car. It is a good purchase at a figure near the above price.

Pullets should not be allowed to roost before they are about four months old, because if they do, crooked breastbones will likely result. But when perches are provided they should have plenty of room. Figure on placing the perches about twelve inches apart and allowing from four to six inches of space for each bird.



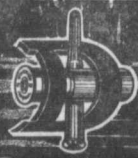
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Dominion Shot Shells

are good shells—backed by the guarantee of the big "D" trademark and Made in Canada. For partridge, geese or ducks Canuck, Sovereign, Regal, Crown or Imperial are the real game-getting shells.

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We also manufacture a full line of Grain Grinders, Saws, Frames, Pumps, Tanks, Water Boxes, Concrete Mixers, Windmills, etc. Catalogue of any line mailed on request.

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ADVERTISE in these popular columns, which others find so profitable—costs you only \$1.00 an inch.

Full grown birds need even more room than this; for them the perches should be 16 or 18 inches apart.

Besides plenty of room another essential in the Poultry House is frequent change of air. Fresh air promotes growth and masses vigorous, well-developed birds. So essential is this fact to the health and benefits of large runs and good feeding may be impaired when it is ignored. But good ventilation does not mean letting a draft blow across the chickens. This would cause death as quickly as foul air. With a little care as to construction a poultry house may be built that allows a constant change of air but does not allow the rate of circulation to become rapid enough to cause a draft.

One other point—cleanliness—must not be overlooked with regard to the pullets' housing quarters. Keeping the floors and drooping boards clean reduces the number of hiding places for mites and disease germs. White-washing or spraying with crude carbolic acid, diluted with water, also may be recommended against poultry pests. In summertime this cleaning up in the poultry house should be done at least once a month if possible. After the floor has been cleaned, scattering dry litter over it, provides material to absorb moisture and makes a place for the chickens to scratch in. While these measures are simple and inexpensive, nevertheless they are important because of their direct bearing on the egg-producing capacity of the pullets when they commence laying in the fall.

Orchard and Garden

Picking Apples for Winter

IN gathering apple intended for marketing from the trees, the first essential is proper appliances. Light, strong ladders, long enough to reach the top of a tree in full bearing, are indispensable. These ladders should be pointed instead of square at the top end. This enables the picker to put his ladder up through the branches without disturbing the fruit. A strong step-ladder is useful for picking from low-headed trees where the branches hang near the ground. Picking baskets should not be too large and should be either smooth on the inside or lined with canvas. A basket with a rigid rather than a swinging handle should be used for picking. Canvas bags should never be used for picking apples on account of danger of bruising the fruit.

Care should be taken in handling the fruit from tree to barrel, and from the orchard to the fruit-house where it is to be graded and packed for the market. Where apples are packed, a suitable sorting table should be provided. This table may be any length desired, but should not be more than three feet six inches wide and not more than eight inches deep. The standards on which this table rests should be long enough that a man may stand upright when he is working, some padding such as excelsior should be placed in the bottom and this covered with canvas or coarse burlap, to prevent the fruit from getting bruised.

If the best results are to be secured, a plank 12 inches wide should be fastened to the floor. The barrels should be set on this while they are being filled and prepared for heading. This is important. A barrel cannot be properly packed on a level floor. A proper barrel press with hooks on the end of the barrel to one which grips the bulge. The latter contracts the barrel and when the press is taken off it slackens to some extent.

The barrels should rest near a window where the light is good while the

face is being laid. A platform one foot from the floor is a help to the man using the work. A proper place to keep pulp heads, nails, hatchets, stencils, brushes, barrel heads and liners, saves time and cuts down the cost in the packing-room. The packing-room should be kept clean. Decayed fruit, together with all leaves and dirt, should be taken out twice every day. Keep the place sanitary.

The apple is a tender fruit and should be treated as such. It should not be thrown about in a careless way from barrel or box to the packing table, from the table to baskets, or from baskets back into the barrels. Rough handling reduces the quality, lessens the profits and ruins the packer's reputation.

To face a barrel properly, uniform sized fruit must be used. If apples are three and a half inches, intention will make the face—two circles and one in the centre. Three-inch apples will require two circles and three in the centre—twenty-seven apples. Two and three-quarter inch apples will require three circles, and four in the centre—thirty apples. Two and one-half inches will require three circles, and one in the centre—thirty-seven apples. One in the centre—thirty-seven apples present an attractive appearance. Extra large apples should be put in the centre of the barrel.

As each basket is emptied, the barrel should be racked or shaken so that every apple will find its place. When the barrel is nearly full, it should be well and thoroughly racked and then tailed. By tailing I mean that the apples should be so placed that the bottom of the barrel will be level as the face. If this is done, each apple gets an equal amount of pressure and none are injured when the bottom is pressed in. If a barrel is improperly racked down, the fruit should not be quite as high as the ends of the staves when it is headed. Over-pressing is responsible for many slack barrels when the fruit is opened in the market.

All apple barrels should be nailed before the fruit is packed in them, and all nails protruding on the inside should be clinched. This avoids injury to the fruit by nail points. The bottom is nailed after the barrel is closed. Liners should be used on both ends of all packed barrels, less and smaller nails may be used; the barrel is more easily opened and is stronger.

A barrel containing apples for market should be stencilled nearly as follows: "Packed by" (then follows the name and address of the packer), the variety of fruit and the grade. The barrel is now ready for market.

Celery for Winter.

SWISS celery as is wanted for early use is blanched in the garden by drawing up the stalks, or by packing the stalks in two or three successive hoeings, or by the use of boards. The stalks should be blanched right up to the foliage. Drain line is useful for blanching small quantities for the table. That part of the crop wanted for winter and spring use should have the soil worked in among the stalks sufficiently to hold them in an upright position. Use the soil in the case of weather, more soil should be earthed up to the top of the leaves, so as to almost cover them. Then as the weather becomes colder, straw, hay, marsh grass, corn stalks, or other litter should be added to exclude the frost. A layer of soil a foot deep may also be placed on the top of the litter.

Many people lift celery when cold weather sets in, and pack it together, in an upright position, in trenches of sufficient depth so that the tops of the plants are even with the surface of the ground. Where frost penetrates deeply, this method has its advantages, but lifting celery in this

(Continued on page 17.)

The Bluebird

The Bluebird has for ages been the symbol of happiness.

How to attain this ever-elusive state has been the study of men and women from the beginning of time.

Centuries of experience have shown that contentment is the one thing needful to secure happiness.

Contentment is possible only where food, clothing and shelter are assured from year to year.

In other words, poverty makes happiness or contentment impossible in a world such as the one in which we are living.

Life insurance is the great enemy of poverty and therefore conduces much to the happiness of our people.

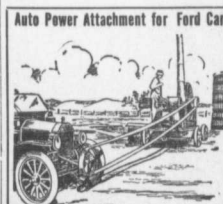
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The paid subscriptions to Farm and Dairy approximate 20,000. The actual circulation of each issue, including copies of the paper sent to subscribers who are but slightly in arrears, and sample copies, varies up to 22,000 copies. No subscriptions are accepted at less than 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, provided such transaction occurs within one month from date of this issue. And it is reported to us within a week of its occurrence, and that we find the facts to be as stated. It is a condition of this contract that in writing to advertisers you state "I saw your advertisement in Farm and Dairy."

Agents shall not play their trade at the expense of our subscribers, who are our friends, through the medium of these columns; but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts.

The Rural Publishing Company, Ltd PETERBORO AND TORONTO

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

A Wise Decision

IN these days when many foolish laws are being passed and official regulations being made, relating to the increased production of food products and the control of their prices, it was refreshing recently to read the following statement by Herbert Hoover, Food Administrator for the United States:

"Price fixing for meat and dairy products has no place in the Government's food control plans. Not only would it be inadvisable to institute price fixings in these industries but the food administration has been given no such power. As long as there is a heavy demand for meat with decreased production, meat prices will continue to soar. The hope of the food administration is that it can stabilize quotations and thus eliminate speculation. I cannot believe that there is a panacea for a situation of this kind. One problem is to increase production. The best we may expect is a slow development towards the ends we see. Everywhere in Europe price-fixing—that is, the naming of 'maximum prices'—has failed."

The chief danger of existing conditions lies in the fact that Governments are devoting their attention to superficial things and neglecting the fundamentals. For years before the war, rural population was declining while urban population was increasing. For years also before the war, the number of beef cattle and sheep on this continent, in proportion to the total population, was

declining steadily. We were bound, therefore, to meet with a food famine sooner or later, even had there been no war. The war hastened conditions by some years, but is not the primary cause of the world's food shortage as this is affected by American conditions. The only effect the war has had been to intensify conditions which were already prevalent, and which the country was beginning to realize even several years before hostilities commenced. By withdrawing still more men from the soil and then imposing a still greater burden upon those who have been left on the farms of both Europe and America, the dangerous situation that already existed has been aggravated, not created.

In America the primal cause of the food shortage lies in our economic conditions which, in a thousand and one concealed ways, cast unfair burdens upon the agricultural classes and thus tend to build up the cities at the expense of the country. Our land laws are one of the greatest causes, but in addition must be considered the combines and trusts which operate behind tariff walls and absorb the wealth of the country through enhanced prices into the pockets of the protected and bonused industries. Instead of these conditions having been dealt with in Canada they have been intensified inasmuch as the tariff has been raised seven and a half per cent, since the war commenced. Instead of dealing with the fundamentals, our Government is crying for meatless days, for economy in the consumption of food, for the production of more food in back yard gardens, and other similar measures good enough in themselves, but absolutely inadequate to meet the needs of the situation. Thus the public is being led to expect relief from inadequate remedies. The result is certain to prove disappointing and the outcome is likely to create a very dangerous sentiment of unrest in the minds of the public who are beginning to lose confidence in the ability and integrity of Government officials. Further progress along existing lines leads in the direction of mob rule and even revolution.

Fundamental Reforms Needed

ONE of the most dangerous outcomes of existing conditions has been the tendency to begin the setting of maximum prices for food products. This may look like an easy way of meeting the situation but, as Mr. Hoover states, it is almost certain to prove disastrous in its results. When the price of any food product is arbitrarily set without regard to its relation to the cost of production and the profit obtained from its sale in comparison with other products, the ultimate result is certain to lead to a decreased production of this article and thus to make it more difficult for the public to obtain the very things which they most need. Expedients such as the fixing of prices are generally illusory in the benefits they appear to confer as such benefits are transitory in character and result in the creation of worse conditions than those they were intended to rectify.

Before the production of food products can be materially increased the burdens on farmers must be lifted and the net returns upon their labor and the capital they have invested, must be materially increased. When the Government desired shells it paid sufficiently high prices for them to make it possible for the munition factories to pay high enough wages to attract labor from other industries to the making of shells. Until the production of food is made sufficiently profitable to make it possible for farmers to engage help at a profit we need not expect to see any material increase in production. Instead, a decline may be anticipated as long as existing conditions continue.

The first step required towards an increased production of food products is to remove the tariff

on all those things which the farmer requires in his farm operations. In addition, steps should be taken to lower the tariff on all articles where there is any reason to believe there are tariff combines. This suggests a very large list of articles. A third step would be to place a special war tax, either provincial or national in character, upon the unused land at least, both in the country and in the cities. This would tend to reduce the value of this land and make it possible for those who would like to use it for the purposes of increased production, to obtain control of it on conditions that would enable them to work it at a profit. These reforms are absolutely fundamental in character. To ignore them is to court disaster no matter how active the Government may be in the passing of regulations and laws dealing with existing conditions. Apparently these will have to become much worse before the public will realize the necessity for the taking of action of this character. Unfortunately, it may then be too late to take such action.

Breeding Counts

PROF. WILBUR J. FRASER, of the University of Illinois, has recently published convincing proof of the paramount importance of good breeding in profitable milk production. Prof. Fraser visited some large herds in his native state, selected the best and poorest cows from these herds, and shipped them to the University. The following year, the best cows from one herd had an average production of 5,922 lbs. of milk and 406 lbs. of fat, while the poorest cows averaged only 3,098 lbs. of milk and 119 lbs. of fat. The average production for three consecutive years was 11,390 lbs. of milk and 404 lbs. of fat from the good cows, and 3,850 lbs. of milk and 138 lbs. of fat from the poor ones.

The low production of the poor cows was due to lack of feed. In all of these cases the cows were fed identically, their roughage consisting of alfalfa hay and corn ensilage, with a good grain ration for almost the entire year. The difference in production must be attributed to breeding. The good cows were bred for milk production; the others were not. Fortunately, the introduction of producing blood into a herd is comparatively easy. A dairy bull, bred from producing ancestry, will soon leave his mark on the milk producing ability of his offspring, and from them, in three or four years, a profitable young herd can be reared to replace discredited animals in the old herd. The first essential to such intelligent replacement, however, is milk and fat records to show where the unprofitable producers are.

Soldiers Dislike Oleomargarine

(Weekly Sun.)

"Oleomargarine is good enough for our soldiers, it is good enough for us." Thus have "busy-body agitators argued their case for oleo, and played into the hands of the only ones to benefit from its introduction into Canada. That it isn't good enough for our soldiers is apparent from the words of Pte. Jos. Wines, who is quoted as saying that margarine would never be used by the people of Earlscourt or the British people residing in Canada.

"English people will boycott it," says Mr. Wines. "They had enough of the stuff in the Old Country, and before it is forced upon the people of Canada there should be a vote of the returned soldiers and the soldiers in the trenches taken upon the matter."

There are two sides to this question; consumers and farmers take up all the room on one of them, while would-be oleomargarine manufacturers are on the other. It is a straight question of "loss and profit," respectively.

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In Union There is Strength

United Farmers' Activities

A SPECIAL general meeting of the shareholders of The United Farmers' Cooperative Company, Limited, held in Toronto on September 18th, ratified the decision that had been made at the last annual meeting to make application to the Provincial Government for authority to increase the capital of the company from \$10,000 to \$250,000. The purpose of the increase is to enable the company to buy and sell the goods it handles to better advantage than has been possible hitherto. For instance, it is possible to make great savings by purchasing supplies in large quantities. This requires large capital and for this reason the company has not been able hitherto to obtain goods at low enough prices to enable them to compete advantageously with other business firms. In the same way it is possible in the fall and at other seasons of the year to purchase mill feeds and other supplies at low prices and later in the season, when the market price of these commodities has advanced, to sell them to advantage, even although the price asked may be lower than that charged by most firms. Last winter the company found it hard to sell certain lines of supplies because it had to go into the open market and purchase these at higher prices than they might have been purchased for had they been purchased earlier in the season. Other companies which had more capital and which had purchased their supplies earlier were, therefore, able to undersell the Farmers' Company.

Meetings of the directors of the company were held both before and after the shareholders' meeting. It was reported that an influential labor organization in Toronto desires to enter into purchasing arrangements with the company and has requested that a representative of the company attend their meetings and obtain orders for farm products. The company has issued a special price list for the benefit of the members of this organization and hopes to obtain considerable business through them.

The directors have appointed a committee to revise the by-laws of the company covering points of the Company's management that have arisen since the by-laws were first adopted. Another committee is at work preparing the prospectus which will be used this fall and winter in selling the stock of the company.

The first six months of the year were much the most successful in the Company's history, the sales during that period doubling the total sales for last year. During the last two or three months sales have fallen off considerably, owing to the binder twine situation, the impossibility of obtaining coal, and the fact that feed has been so plentiful this year, farmers have not been buying mill feeds and other similar goods. These are conditions, however, which occur in every business, and which, therefore, have to be taken largely as a matter of course.

The annual meeting of the company is likely to be held this year during the third week in December. To facilitate the making of reports the books will be closed on the 31st day of October. It is being recommended by the directors that this date for holding the annual meeting be made permanent.

A desire has frequently been expressed that efforts should be made to see if the company cannot take steps to lead the various cheese factories in Ontario, which are now operating on the cooperative principle, to cooperate on a larger scale in the marketing of their products and the pur-

chase of supplies. A committee composed of President B. C. Tucker, Secretary J. J. Morrison, Manager E. C. Gurney, and Messrs. E. A. Van Allan, Aultsville; George Carlaw, Warkworth; H. B. Cowan, of Farm and Dairy; J. B. Anderson, of Mountview; E. R. Stoddan, Perth, and R. B. Faith, of the Ottawa Valley Journal, have been appointed to look into this matter.

There having been a desire expressed that steps should be taken by the company to assist farmers in the marketing of their live stock, another committee has been appointed, composed of President Tucker, Secretary Morrison, Manager Gurney, and Messrs. Jos. Little, of Shelburne; Fred Hornshaw, Whitevale; J. L. Plain, Madoc, and H. Hoover, of Harold, to look into this matter.

Still another committee composed of the President, secretary and manager, with Messrs. E. G. Hoover, James Poole, and F. G. Sandy, are looking into the seed situation.

U.F.O. Man Honored

MR. W. C. GOOD, second vice-president of the United Farmers' of Ontario, has been tendered the nomination of the Independent Labor party at Bramford. Owing to pressure of business and domestic affairs Mr. Good has felt it necessary to refuse this honor. Mr. Good is a well known throughout Ontario and Canada as an up-to-date farmer, a clear thinker and a wide-awake citizen. In placing his refusal before the party he called on the working men to break away from old party politics, stating that there is a little difference between the parties which represent the Government and the Opposition, but to form with the farmers a new party with higher aims, which party will treat all alike.

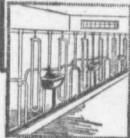

The Press and the U.F.O.

AN important meeting composed of President E. H. Halbert, Melancton; J. N. Kermeghan, of Goderich, representing the United Farmers of Ontario, and Messrs. J. J. Morrison and E. C. Gurney, Toronto; Elmer Leck, Ottawa; A. A. Powers, Orono, and E. A. VanAllan, Aultsville, representing The United Farmers' Company, and representatives of the farm press, was held in Toronto last week for the purpose of discussing ways and means of interesting the farmers of the province through the press in the work of the United Farmers' movement. Several farm papers were represented, including Farm and Dairy, The Canadian Countryman, The Farmers' Magazine, and the Weekly Sun. Mr. W. L. Smith, editor of the agricultural section of the Toronto Globe, was also present. At one time officers of the United Farmers thought that it might be possible to publish a small monthly or semi-monthly paper for circulation among those interested in the movement, giving up-to-date information concerning the work being done in order to keep the members in close touch with the central office. Careful inquiries have been made into the possibility of conducting such a paper with the result that it has been found that some leading advertisers are afraid to advertise in it for fear their business might be injuriously affected by those who are opposed to the spread of the cooperative movement among farmers of the province. For this reason there is little possibility of securing enough advertising

(Concluded on page 17.)

TORONTO PUMPING ENGINES

Supply Plenty of Water without any Boiler, to House as well as Barn

THE TORONTO Pumping Engine does much more than relieve you of the tedious labor of hand pumping. With a pressure or elevated tank, it supplies an abundance of water under pressure, so that you can have it always on tap throughout the house as well as the barn, and with force enough behind it to wash windows, buggies or autos, and even put out fires.

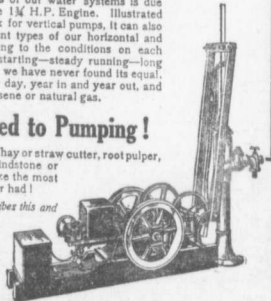
The outstanding success of our water systems is due largely to our wonderful little 1 1/4 H.P. Engine. Illustrated here with our standard Jack for vertical pumps, it can also be used with several different types of our horizontal and "Bulldozer" pumps, according to the conditions on each particular farm. For easy starting—steady running—long wear—and economy of fuel we have never found its equal. It is right on the job, every day, year in and year out, and runs on either gasoline, kerosene or natural gas.

Nor is it Limited to Pumping!

Connected up to grinder, hay or straw cutter, rootpuler, cream separator, milker, grindstone or washing machine, it will make the most willing "chore boy" you ever had!

Our Illustrated Booklet describes this and other pumping engines fully, and gives much valuable information about water systems generally. Write for it.

We also manufacture Engines, Windmills, Silos, Stable Equipment, Etc.



STOCK show their appreciation of TORONTO STABLE EQUIPMENT

by producing more milk and beef from the same feed. That's because TORONTO Steel Stalls and Stanchions, Litter Carriers and Water Bowls make their living quarters cleaner, drier and more sanitary, and provide a comfortable drink whenever they want it.

18 Write for our Illustrated Booklet on Stable Equipment—there are some profitable pointers in it.

Ontario Wind Engine and Pump Co. Limited
Dept. "D"
TORONTO and MONTREAL.

OK CANADIAN POTATO DIGGER

Saves exactly HALF the cost

Digs the crop clean and in half the time. New stone shield. Side delivery of vines. The O.K. Diggers are light in draft. Made in sizes and styles to suit every condition of soil.

FREE to potato growers—our 48-page booklet, "Money in Potatoes."

CANADIAN POTATO MACHINERY CO. Limited Dept. 93 GALT, ONT.



GILSON—"JOHNNY-ON-THE-SPOT"

THIS ENGINE only \$49.50



A BIC, little engine, that "Goes Like Sixty" at every light and medium heavy job on the farm. A heavy worker, and a light eater—dominating in Quality and Service. The biggest selling engine of any size in Canada—quantity production enables us to undersell all competitors—raising the quality, and lowering the price. Do not buy a cheap engine—buy a good one at a quantity price. All sizes at proportionate values. Write today for free catalogue stating what size you intend to buy.

GILSON MFG. CO. Ltd. 407 York St., GUELPH, Ont.

When You Write—Mention Farm & Dairy



CHOOSE not your task, but choose to do it well. God did anoint thee to wrestle, not to reign.—E. B. Browning.

Four Thousand Bushels of Corn

(The Youth's Companion.)
BY CLIFORD V. GREGORY.

"I've a good mind to back out yet," Mrs. McKeene said, as she tucked a moth ball into one of her husband's shirts, and then laid the shirt carefully in the bottom of the trunk. "You know just as well as I do, Henry, that it's putting too much responsibility on those two children to leave them here alone for five months to run the place."

Henry McKeene held up a pair of trousers, and eyed them critically. "Those pants look pretty seedy, Emma," he said, "but I don't suppose I'll want to wear my best ones when I get to climbing Pike's Peak. And when it comes to going down that Devil's Slide that Cousin Emily wrote about, I guess I'd better wear the oldest pair of pants I've got." He laughed boisterously.

"His wife did not smile. "I tell you I'm not going," she said. "You can just take those tickets back and use the money to buy a new horse or something. I shouldn't feel easy for a minute, thinking of those children here all alone."

"Pshaw, Emma!" her husband protested. "Jimmie and Mary aren't kids any more. They can run this farm just as well as if we were here. And besides, they'll have Aunt Jane."

"That's true," Mrs. McKeene admitted, reluctantly. "Jane will be a big help to them. As for the plans are all made, I suppose we'll have to go."

Henry McKeene heaved a sigh of relief. "I was afraid for a minute you really meant it, Emma," he said. "It has made me feel a few years younger just talking about this vacation, and it's done the same for you, if you'd only admit it. It would never do to spoil it all by backing out now."

"Who's talking about backing out?" cried a voice from the doorway, and Mary McKeene came in with an armful of freshly ironed clothes.

"Your mother's forgotten all about Yellowstone Park and the Grand Canon!" her father grumbled. "She wants to stay at home, but she's traveling back and forth between the corn pile and the kitchen stove."

"Well, she can't," Mary answered. "Jimmie has just come home from town with the sleeping-car tickets."

"You'll be sure to put a fresh ad in the bottom of every setting hen's nest, and give her a good trial on china eggs, won't you, Mary?" Mrs. McKeene asked, anxiously.

Mary laughed. "Yes, as if I hadn't set hens all my life, mother! Who raised most of the chickens last year, I'd like to know?"

"And don't let Jimmie work too hard. It's a big job for a twenty-year-old boy to run a four-hundred-acre farm all alone."

"With the help of two husky hired

men who will do most of the work," Jimmie remarked, as he entered. "Now I want you to stop your worrying, mother. Where is the seed-corn tester, sis?"

"Behind the stove, where you left it. You didn't suppose I would dare move that precious tester, did you?"

Jimmie picked up the tester, and went whistling to the attic to test the corn, and to weed out those ears that proved to be too weak for satisfactory seed.

A few hours later, with a great deal of bustle and excitement and paring of instructions and promises, Henry McKeene and his wife got into the double



Nothing adds so much to the Home Grounds, be they in Country or City, as a Few Well Chosen Shrubs such as those Shown Herewith.

buggy with their trunks and suit cases.

"You'll look after the children, won't you, Jane?" Mrs. McKeene asked, as Jimmie picked up the reins.

Aunt Jane, who was half a head shorter than Mary, solemnly promised that she would. She and Mary waved a good-bye as the buggy went out of sight round the corner.

"It's the first real vacation either of them has had for twenty-five years," Aunt Jane said, as she began to peel the potatoes. "It will do them a world of good."

"If only mother doesn't worry! I must write to her every day, and tell her how everything is getting along."

"She'll forget to worry when she gets out on Hiram's farm in Arizona," Aunt Jane predicted, "and I shouldn't be surprised if she forgets it so completely that she never remembers it again when she gets home. Travel does wonders for people, Mary."

"I suppose so. I must go out and fix a nest for that speckled hen while the meat is cooking."

When Jimmie, after seeing his

father and mother safe aboard the train, turned to leave the station, he met Colonel Edwards, president of the Duketon State Bank. Colonel Edwards bore the reputation of being the richest and most eccentric citizen of the county. He did not have a farm of his own, but he did have a half-acre garden, which was famous all over the country. But he spent half his time in that garden, and it produced a great quantity of vegetables.

"So you mean to go off alone this summer, do you?" he asked Jimmie.

"Yes, sir, with the help of the hired men," Jimmie answered.

"Pretty big job for a young fellow, isn't it?" said the colonel.

Jimmie flushed, reference to his youth always bothered him. "I'll be older in the fall," he said, shortly.

"And wiser. I wish nine-tenths of your farm were somewhere else. Forty acres is the ideal size for a farm, and as much as anyone can farm intensively. But I wish you good luck, even with your four hundred."

Before going home, Jimmie drove round to the blacksmith shop, in order to get some plow bottoms that he had left there a few days before to be sharpened.

"I suppose you feel a foot taller now that you're boss of the ranch," the blacksmith said, as he put the bottoms into the back of the buggy.

"I feel pretty small when I think of all there is to do," Jimmie answered. "I don't think I'll have much time for getting myself on the back."

"Who's going to work for you this year, Jimmie?"

Getting good men in the spring was

could make nothing of them. "Well, I'm not going to lose any sleep over it," he said to himself. "If he's a shoddy worker and stays by us, that's all I want, anyway."

And with that he dismissed the blacksmith's warning from his mind. "I don't care to say anything against mother's cooking before she's out of the state," Jimmie declared, half an hour later, as he reached for the syrup pitcher, "but these muffins are surely as good as any I've ever made."

Mary displayed little pleasure as Jake gave a nod of approval at Jimmie's praise.

"If she isn't a first-class cook before summer is over, it won't be because she doesn't have practice enough," said Aunt Jane. "It beats all the amount of food three hungry men can eat."

"She will have good help, anyway," Jimmie remarked.

"You are a worse flatterer than your father, Jimmie," replied his aunt, with an attempt to hide her pleasure. "You know I'm in charge of you two children, and I don't want to hear any more speeches like that."

Jimmie laughed.

"When it comes to really important things, like cleaning my shoes or leaving my boots in the woods, you do as you say, Aunt Jane," he said. "But when you try to limit my speech to remarks about the weather, that is too much."

"My authority is slipping away from me almost before I begin to use it!" exclaimed Aunt Jane. "Don't blame me if the whole place goes to rack and ruin."

Sam Walker, a neighbor who lived across the road, came over that night while Jimmie and Jake were milking. "Well, how does it feel to be boss, Jimmie?" he asked, as he seated himself on an upturned pail.

"I haven't done much bossing yet," Jimmie answered.

"I suppose I'll be before the summer's over, but I'm going to do my best to keep things going as well as if father were here."

"Looks like we might go to seeding the first of next week if we don't get any more rain," Sam remarked.

"The upland will be all right, I guess," Jimmie agreed. "It will take a week, anyway, before we can get on to the bottoms."

"And more than that if the old Stone River goes on a tear."

"But they say there's not much danger since the new dikes are in."

"There's always danger with the Stone River, Jimmie. You never know what to expect of it next. I always said your father took a big risk when he bought that eighty acres of swamp land. He never had a good crop on that peat forty yet, has he?"

Jimmie shook his head. "The other forty raised seventy bushels of corn to the acre last year, though; our upland fields dried out, and only went half that."

"Oh, that other forty is all right as long as the river stays in its banks, though what you are ever going to do with that peat forty I don't know. It"

(Continued on page 17.)

"FOUR THOUSAND BUSHELS OF CORN."

This is the title of a very interesting short serial story, published in the September issue of Farm and Dairy. As the title suggests, the plot of this story is laid in the corn belt of the United States, it concerns itself with the winning of a corn crop competition, the development of a great deal of interest. We submit it to Our Folks with the expectation that it will give them pleasure and profit from "Four Thousand Bushels of Corn."

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It is sure often in our Christ's will to a certain to us, what were here He take? We know that At the moment also is His for Him, the the more v the more is our lives.

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The single Dutch hyacinth results.—E.

THE UPWARD LOOK

God's Wishes

FOR this is the will of God, even your sanctification. 1 Thess. 4: 3.

It is such a blessed question to ask often in our Christian life: What is Christ's wish or will for us in regard to a certain course? If He could speak to us, what would He advise? If He were here with us, what action would He take? In the hour of deepest grief we know that that is His will for us. At the moment of keenest joy, that also is His will. The greater our love for Him, the closer we live with Him, the more vivid is this thought and the more is it a guiding thought in our lives.

The following is an illustration of the powerful incentive that the wish of a dear one, may be:

For many months, now, visits have been paid, in connection with patriotic work, to one particularly poor, little house. There was so little furniture in the living-room, that certain articles, set in state on the centre table, showed out conspicuously. These were a teddy bear and a doll set of furniture, which had once been given to a little daughter, by a dearly loved son, who had been at the front, "somewhere in France," for over a year. All his post-cards were shown and letters read at the monthly visits. Occasionally the visitor took with her a little child, to make the visit a bright spot in the lonely lives.

This week the child was taken. On arriving the sad news was received that the son had been killed. Unconscious of terrible tragedy, the little one had taken possession of the toys. On leaving she went to put them in. Through tear-dimmed eyes the old man looked at his wife. She nodded, and then, with tears falling fast, after tenderly dusting them she put them into the arms of the little one. The strenuous remonstrances of the visitor continued until the old man looked up with a brave smile, though his face was marked with anguish, and said: "If he had been here, he would have wanted the baby to have them."
—I. H. N.

Flowers From Christmas to Easter

John Gail, Peel Co., Ont.

NO class of pot plants gives more pleasure and better results for the time and labor expended on them than does a well selected collection of fall potted bulbs. They are particularly well suited for the amateur flower lover, as, by a little care in their culture, a succession of their beautiful fragrant blossoms can be obtained from Christmas until Easter, or later if desired. Bulbs can be potted from September until the end of November, but the early potted bulbs give the best results. Bulbs of Roman hyacinths and early paper white narcissi, potted early in October, may be in bloom by Christmas.

A good collection for the amateur is, white Roman hyacinths, named Dutch hyacinths, and narcissi in variety. The white flowering variety of Roman hyacinth is really the best. The other colors are not quite as pretty, are not so uniform in shape and are not so early flowering as the white. The blue, rose, and pink shades, however, give a pleasing effect. Always pot colors separately, especially the white, as they bloom at different periods. Roman hyacinths should be planted as thick as three or four to a five-inch pot, or more bulbs to a larger pot to give the best effect.

The single flowering varieties of Dutch hyacinths usually give the best results. The selection is largely a

matter of taste in colors and shades, as all named varieties are usually of equal value. Dutch hyacinths always look well planted in groups of three, five, or seven, in jardiniere. There should be about one and a half inches of space between each bulb when planted in groups.

Most varieties of narcissi are suitable for pot culture. The early paper white is really the best on account of its earliness. Potted early, it can easily be had in bloom at Christmas. The soil for the pot culture of bulbs need not be very rich in fertilizers. At the same time bulbs will not give the best results in poor soil. If the soil should be heavy, mix in a little fine, sharp sand as before recommended. Always have the soil fairly dry when used for potting.

After bulbs are planted give the pots sufficient water to moisten well all the soil. Then stand the pots away in a cool, damp, dark place in a temperature of from 40 to 50 degrees

to secure good roots on the bulbs. The cellar floor, a dark basement, a close cupboard or box will serve this purpose well.

The bulbs as a general rule take four or five weeks to root well. To secure good roots on bulbs before bringing them into the window is absolutely essential to ensure the best blooms.

The bulbs may remain in their cool, dark quarters for several weeks after being rooted if desired. They must be brought into the window when the pot growth has reached a height of about two inches, else the flowering results will not likely be as good as they should be. When brought into the window, do not place the pot in sure that the soil is kept thoroughly moist by regular and copious waterings. Give enough water to moisten all the soil in the pot. Bulbs not potted early in the season should be kept in a cool room or cellar until

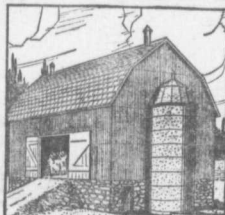
wanted so as to prevent them starting into top growth.

Substitutes Should be Liberally Used

THE following is an extract from a letter to the Women's Auxiliary, of the Organization of Resources Committee and their co-workers throughout Ontario, sent out by Food Controller Hanna:

There is a world famine of wheat and a world shortage of beef and bacon. These are the commodities most required for overseas. It is to ensure supplies of these foods and other non-perishable and easily storable commodities that every housewife is being asked to sign the Food Pledge. Canada has abundance of other foodstuffs. By reducing domestic consumption of wheat, beef and bacon and by using substitutes, the housewives of the Dominion can give

IMPROVE YOUR FARM



Pedlar's Corrugated (Galvanized) steel siding and "George" Shingles for modern barns, and Pedlar's Silo Covers.

Add to its profitability as a business, its comfort as a home and its value as an investment by modernizing it with



Pedlar's "Stone or Plain Pattern Siding" and "Oshtawa" Shingles, for beautiful, fire-proof, enduring homes.

PEDLAR'S "PERFECT" SHEET METAL PRODUCTS



Pedlar's Metal Ceilings and Walls for the interior—2000 handsome patterns—last as long (without repairs) as the house itself.



Delapidation rapidly overtakes any wooden structure. Any day fire may destroy it. Every thunderstorm brings the menace of lightning. But if you build with Pedlar's Sheet Metal Products you have buildings that will endure long years without repair and that are practically immune from lightning or other accidental cause of fire.

Pedlar's Toncan Metal Culverts for farm drainage are unexcelled. Last longer than the road they run under. Easily and quickly installed by anyone.

Pedlar's Portable Garages for the car, and quickly erected buildings for housing implements, etc., are conveniences highly appreciated.

Pedlar's Sheet Metal Products are the true farm economy. They mean freedom from excessive first cost. They reduce repair bills to the lowest ebb. They constitute a permanent improvement that benefits you while you work the farm and make it easier for you to get your price when you are ready to sell.

Illustrating and describing Pedlar's Sheet Metal Products for the farm

THE PEDLAR PEOPLE LIMITED

Executive Office and Factories

ESTABLISHED 1864

OSHAWA, ONT.

Branches at Montreal, Ottawa, Toronto, London, Winnipeg, Vancouver

BUY Hallam GUARANTEED FURS

BY MAIL DIRECT FROM TRAPPER TO YOU



No matter where you live, you can obtain the latest styles and the highest quality Fur sets or garments from Hallam's by mail. All Hallam garments are high quality Furs—yet can be obtained by you direct by mail at lower prices than elsewhere for the same quality—every Hallam garment is guaranteed.

Why We Can Sell at Such Low Prices

Because, in the first place, we buy our skins direct from the Trapper, and sell direct to you for cash, saving you a great share of the middleman's profit—high store retail accounts—wholesale salaries.

Then you are sure of satisfaction when you buy by mail can examine them without interference—if the goods do not please YOU in any way—you can simply return your money—OUR REFUND, and we will cheerfully return your money—you are not out one cent—we are thus compelled to give extra good value, as we cannot afford to have goods returned.

The articles illustrated in this advertisement are fair samples of Hallam's great values and will be sent promptly on receipt of price.

1500—Driving Coat—Handsome Manchurian of Fine Mink, 45 Wool Set. Newest design, made from fine, jet black silky skin. The large stole is in two skin style, wide across the back and shoulders—trimmed with heads, tails and pawes. Made over soft down bed—has wrist cord and is trimmed with head and tail—lined with corded silk poplin. Exceptional value. \$15.50 per set, delivered to you.

1501—Muff to match in new mink shape (as illustrated), or in pillow style. \$15.50, delivered to you.

1507—Hat to match, silk lined. \$7.50, delivered to you.

FREE

A beautifully illustrated Fur Style Book—giving advance information on furs and fur fashions and containing 100 illustrations of up-to-date Furs and Fur Garments—these illustrations are photographs of living people—thus showing how the Furs REALLY appear;—this book is free to every member of the family.

Don't fail to send for this book TO-DAY—it is now ready for mailing and will be sent as requests are received.

HALLAM'S 1917-18 FUR STYLE BOOK

Don't forget to send for Hallam's Style Book to-day—it's FREE—Address, using the number as below.

John Hallam
Limited
835 Hallam Building TORONTO
The largest in our line in Canada.

Better - Cheaper POWER



FOR Severe Service on the farm, you will find no engine to equal a Page. Two types—on kerosene or gasoline. Five line and one that burns kerosene or gasoline. Five types of gasoline engines, the smallest 1 1/2 h.p.; the largest 7 h.p.—each one offered at extremely low price, as the result of our direct-to-the-farmer way of selling.

For constant hard work, you need an engine as dependable as the PAGE. For every-day use and all-round dependability, you cannot find engines to equal these—even at much higher prices. A post card will promptly bring you full information about the PAGE—the engine that pays for itself in a short while, that furnishes power at low cost.

THE PAGE WIRE FENCE COMPANY
Limited
WALKERVILLE, ONTARIO.

vital war service. They will give it once they realize the necessity.

All that is asked at present is that they do not use beef and bacon on two days a week or at more than one meal on any other day, that they reduce their consumption of wheat bread by one-quarter and they use perishable and non-perishable products to the greatest possible extent as substitutes for the staple foods required for export.

The appeal to the housewives is contained in the one word "substitutes." When they realize the great need of the fighting forces and our Allies they will also save every ounce of food possible in order to release more for export. To do this means the complete conservation of our food supplies and the elimination of waste.

A "Soda Biscuit" Roaster

THAT necessity oftentimes is the mother of invention was brought to my attention a few days ago. I was spending the week-end with a friend at her summer cottage. Of course it is impossible to have conveniences in a summer home to the same extent as one would have on the farm or in the city. When preparing meat for dinner, my friend produced one of the long, narrow tin-roasted soda biscuit boxes, which are commonly purchased nowadays. "This is my roasting pan," she said, "and it works to perfection. One day shortly after I came out to the cottage I wanted to roast some meat and suddenly it occurred to me that I did not have a roasting pan. What was I to do? I hunted through all my pots and pans and finally came across this biscuit tin. I also use the same tin for baking bread, as I like the size of loaves it accommodates."

Probably on the farm such a roasting pan would be too small. In the majority of roasts that I buy, in these days of high prices, however, I am also in view of the fact that we are asked to cut down our meat supply, no doubt our roasts will assume considerably smaller proportions and in lieu of a better roasting pan, we might well try out the soda-biscuit-roaster.—R. M. M.

Butter Making Awards

AWARDS in the butter-making competition at London were as follows:

Amateur Class—1, Miss C. A. Comer, London, Ont., score 96.66; 2, Mrs. R. C. Young, Belmont, Ont., score 96.41.

Free for all Class—1, Mrs. W. Hill, Parkhill, Ont., score 97.68; 2, Miss L. B. Gregory, Ilderton, Ont., score 97.64; 3, Miss A. Barber, Guelph, Ont., score 97.60; 4, Miss M. Bryden, Fushling, Ont., score 97.45; 5, Miss M. C. Scott, Denfield, Ont., score 96.86; 6, Mrs. R. C. Young, Belmont, Ont., score 96.37.

Sweepstakes Class—1, Miss M. Bryden, Fushling, Ont., score 97.75; 2, Miss A. Barber, Guelph, Ont., score 97.62; 3, Miss M. C. Scott, Denfield, Ont., score 97.32; 4, Mrs. Houston, Weston, Ont., score 97.22.

Churn donated by Beatty Bros., London, won by Miss M. Bryden.

Lemon Pie.

Yolks of three eggs, well beaten, add two cups sugar and a piece of butter, three and one-half tablespoons corn starch dissolved in a little cold water. Mix all thoroughly, add three cups boiling water, put on stove and boil. When cool add juice of two lemons. Use whites of eggs for meringue. This recipe will make two pies.

ROYAL YEAST

WHEN USING WILSON'S FLY PADS

READ DIRECTIONS CAREFULLY AND FOLLOW THEM EXACTLY



Far more effective than Sticky Fly Catchers. Clean to handle. Sold by Druggists and Grocers everywhere.

THE MARTIN DITCHER AND GRADER

DIGS YOUR DITCHES GRADES YOUR ROADS

EASILY QUICKLY CHEAPLY

REVERSIBLE ADJUSTABLE

PERFECTLY IN EVERY WAY

DOES THE WORK OF 30 MEN SEND FOR FREE BOOKLET

THE PRINCE CAR & CACK CO. LIMITED
63 BAYVIEW ST., TORONTO CANADA

MAKE YOUR BIKE A MOTORCYCLE



at a small cost, by using our attachment. Fits any bicycle. Easily attached and removed. No special tools required.

"Compared With Others"

1. It is lighter, stronger, more reliable, more efficient, more economical, more durable, more powerful than the competition.

FREE BOOK bargain at 50¢. Write today for it. It tells you how to attach the Motor Attachment, and illustrates the complete. Our price on from Shipper.

SHAW MANUFACTURING CO.
Dept. 165
Calabro, Minn., U.S.A.

BOOKS Send for our Catalogue of Books Sent Free on Request.



A UTUAM style

being styled are always in the coming season, will be exceeded waiting, but it is lusty narrow waist with are so much becoming. The high evidence be a str low style of collar collars are to flatter the low waistline, there will be no inset.

Autumn millinery from velours, silk and white in color and gray are some Tam O' Shanter prominence at the least. Some quietness and simplicity autumn costumes.

2139—Child's Set
Many mothers will short collar's set in terms for a dress, a skirt, 1, 2, 3, 4 and 5.

2152-2153—A combination of two waists in this set, a large collar and in from the collar to trailing material. A portion of skirt are contrasting material may be omitted as back view. This dress suits girls cut in waist from

Coming Autumn and Winter Styles



AUTUMN style secrets are gradually being divulged, and of course we are always interested in learning what new style features will prevail for the coming season. One feature, we are told, will be exceedingly narrow skirts for walking, but it is hoped that the ridiculously narrow skirts will not be received with popularity, as those of a greater width are so much more comfortable and becoming. The high collar on blouses will evidently be a strong competitor of the low style of collar. Some of these high collars are to flare upward and outward, not fitting tightly under the chin. It seems that the correct position of the waistline in dresses has not been quite settled up to the present, but the new silhouettes will be slim and tight just below the waistline, around the hips, and there will be no flare from shoulder to instep.

Autumn millinery is being fashioned from velours, silk plush and velvet. Black and white in combination, black, brown, and gray, are some of the leading shades. Tam O' Shanter hats are receiving great prominence at the opening of the season at least. Some authorities tell us that quietness and simplicity are to mark the autumn costumes. All we can do is "wait and see" if such surmising is correct.

2139 - Child's Set of Short Clothes - Many mothers will no doubt welcome this short clothes outfit, which includes patterns for a dress, slip and drawers. Five sizes: 1, 2, 4, and 6 years.

2152-2153-A Stylish Gown-The combining of two materials is shown to advantage in this model. The blouse has a large collar and is trimmed with revers from the collar to the waist line of contrasting material. The belt and lower portion of skirt are also constructed from contrasting material. If desired, the belt may be omitted as shown in the smaller back view. This design calls for two patterns, 19 cent for each. The blouse is cut in sizes from 34 to 44 inches bust

measure and the skirt from 22 to 32 inches waist measure.

2142-Dress for Misses and Small Women - Many of the pretty flowered materials would make up attractively from a design such as the one shown herewith. The full skirt with heading is quite popular and a flowing sash is also a feature of the costume. A little "v" effect is shown in both back and front of blouse. Three sizes: 16, 18 and 20 years.

2147-Girl's Dress-We imagine that this style for the little girl in the home will prove a favorite with many of our home dressmakers. A material with a large design running through it, seems particularly suited to this model, although no doubt many plain materials would be equally attractive. The collar and cuffs are cut in a unique way and the belt gives a high-waisted effect. Four sizes: 4, 6, 8 and 10 years.

2148-Lady's Home Dress-Home dress styles always come in for their share of publicity in our pattern columns and herewith is one designed in simple lines, but attractive in appearance. The collar, cuffs and belt may be made from contrasting material, thus giving a more chic appearance to the dress than if made from the same material throughout. Seven sizes: 34 to 46 inches bust measure.

2150-A Simple Nestlige-it seems extremely early to be thinking of Christmas and Christmas gifts, but our needle design brings the idea to our minds that it might be made use of in constructing a very pretty Christmas gift for that friend who likes dainty articles of apparel, such as the one herewith. Seven sizes: 34 to 48 inches bust measure.

1977-Lady's Apron-How many have laid in their supply of fall and winter aprons? If not fully equipped, the design here shown should act as a practical suggestion. The belt gives a very neat appearance to this covering. Four sizes: 34, 38, 42 and 46 inches bust measure.

We anticipate that many of Our Women Folks will take advantage of our Fall and Winter pattern catalogue offer, by sending along an extra dime with their pattern orders, which will take one of these catalogues to their homes.



Penmans Underwear

THE STANDARD OF EXCELLENCE

Slip into a suit of Penmans and you will be satisfied—because material, style and workmanship make Penmans the last word in underwear.



Also makers of Sweater Coats and Hosiery

Penmans, Limited, Paris

WHAT A FINE GIFT!

Here is a chance for the Boy and Girl readers of Farm and Dairy to give their Mothers a fine present.

BOYS AND GIRLS, all you have to do to get this Fine Chest of Silver is to send us in Ten New Subscriptions to Farm and Dairy.



This chest contains 26 pieces of silver—six solid handed knives, six flat handed forks, six teaspoons, six tablespoons, a butter knife and a sugar shell.

The chest is hardwood and is fitted with a drawer and handles.

On receipt of only Ten New Yearly Subscriptions to Farm and Dairy, we shall immediately send you one of these sets.

Send for them early as our supply is very limited

CIRCULATION DEPARTMENT

Farm and Dairy - Peterboro, Ont.

Celery for Winter

(Continued from page 9.)
manner makes it more stringy than it otherwise would be.

In the colder sections of the country it is necessary to take all the plants up and store them either in a cold cellar or in long narrow boxes, about one foot wide and deep enough to hold the plants upright. As in trenching, the roots should be left on. A couple of inches of moist sand should be placed in the bottom of each box. Put these boxes into a cool, dark cellar. Put these stalks will blanch out as they are required for use.

Be sure that the cellar is rat-proof, as rats are very partial to celery plants during the winter. Celery should only be stored while it is perfectly dry, otherwise it will spoil.

The Press and the U.F.O.

(Continued from page 11.)
to enable such a paper to even pay its way.

It was suggested that the United Farmers of Ontario might send out weekly statements to the press relating to the development of the movement. The farm papers pointed out that they are published on different days of the week and that such reports therefore, would appear in some before they could be used in others. This meant that the papers that received the reports last would not care to publish them. Another suggestion which met with more approval was that a committee of the United Farmers of Ontario should prepare a list of suggested topics for discussion each week during the fall and winter months by the local clubs. Copies of this list could be furnished to the clubs and to the farm papers, who later might encourage their readers to contribute articles on these subjects in advance and the papers might themselves prepare special articles, these to be published in departments relating to the United Farmers of Ontario. This plan was favorably considered, although it was felt that there would be difficulties in the way of the papers being able to induce enough farmers to write and for them to give the time to editing these departments as efficiently as might be desired.

While it was realized that there were serious difficulties in the way of educational work of this character there was an unanimous feeling that it was desirable that something should be done. It is hoped that growing out of this meeting more educational work of this character will be conducted during the coming winter than has been done in the past.

Four Thousand Bushels of Corn

(Continued from page 12.)
used to raise good crops, but like most peat land, a few crops were it out."

"I don't see why it should wear out so quick. It looks rich."

"You can't always go by the looks. Got your new hired man yet?"

"He comes to-morrow. Bill Ellis is his name; he's from over toward Seward."

"Bill Ellis, Bill Ellis," Sam repeated. "Seems to me I've heard that name somewhere." He jumped up suddenly.

"You don't mean Bill Ellis?"

"That's his name. What is the matter with him, anyway?"

"Oh, he's all right, I guess. Only, with your father-away, I wish you had some one else."

"Now see here," Jimmie exclaimed. "You're the second man that seems to think there is something suspicious about Bill Ellis! I want to know what it's all about."

"Nothing that I want to tell you now, Jimmie. Let me know any time you want anything. Good night," and went down the hill toward his

house. Jimmie could get nothing out of Jake about the mysterious new hired man, and he went into the house more mystified than ever.

The telephone bell rang, and Jimmie answered it.

"This is Colonel Edwards," came the reply. "You remember what I said this afternoon about what could be done with forty acres if it were farmed intensively? Well, I've decided to offer a prize of five hundred dollars to the person in this county who this year raises the largest crop of corn on forty acres. Particulars will be published in this week's paper, but I thought you might like to know now."

Jimmie thanked him and hung up the receiver.

"Wouldn't it be fine if we could win that prize while father and mother are away!" Mary exclaimed, when Jimmie

told her and Aunt Jane about the colonel's offer. "We're going to let the rest of them know we're in the contest," Jimmie replied, earnestly, "if we have to raise four thousand bushels of corn to do it."

There was nothing alarming in the appearance of Bill Ellis as he walked into the McKeene yard the next morning. He was big and muscular, and looked like a willing worker. He went to the barn, where Jimmie was fanning seed oats.

(Continued next week.)

Judging Competition at Ottawa

A FEATURe of the Central Canada Exhibition, Ottawa, was the Junior Farmers' Judging Contest. Following are the names of the leading five competitors in each of the judging classes, with the counties from which they come, and their score:—

Heavy Horses: Rutherford Mott-Ghan, Lanark, 182; Wesley Seabrook, Carleton, 177; S. J. Munro, Stormont, 167; Geo. E. Wiggins, Grenville, 162; Jas. W. Mulholland, Dundas, 153.

Beef Cattle: A. M. Ewart, Lanark, 171; Clarence Wilson, Grenville, 168; Frank Gray, Dundas, 166; W. J. Fawcett, Dundas, 164; Thos. K. Stewart, Lanark, 161.

Sheep: Clarence Wilson, Grenville, 132; Harry Johnson, Dundas, 131; Nelson Cross, Leeds, 117; S. J. Munro, Stormont, 93; J. E. Gardner, Lanark, 87.

Swine: John Snodden, Lanark, 184; Harvey L. Thompson, Lanark, 169; Wm. E. Graham, Dundas, 137; Fred Brassard, Dundas, 126; Nelson Cross, Leeds, 120.

Dairy Cattle: Ambrose Kennedy, Glengarry, 168; John C. Gauthier, Glengarry, 137; Clifford Knapp, Grenville, 134; J. B. Plunkett, Grenville, 132; Harry Johnson, Dundas, 129.

What Did Little Mary Plant?



What vegetables do those pictures represent?

TELL US AND Win a Motor Car, Piano, Pony Bicycle, Phonograph Range, Watch, Sewing Machine Etc., Etc., Etc. Little Mary did National Service Work this year—had her own garden. What did she plant in it? The pictures tell you. Put your wits to work, and make out the secrets of the pictures! Those who send us correct, or near correct, answers qualify for these



What vegetables do those pictures represent?

NO MONEY REQUIRED TO ENTER

YOU do not have to pay a cent, or buy anything, to enter this interesting contest, and to qualify for one of the Big Prizes. All you have to do is to send in your answers. Then you will be promptly told how correctly you have solved the pictures and whether you have qualified for an opportunity to win the Big Prizes (full list of prizes will be sent to you). You will receive post free a copy of "RURAL CANADA for Women," (the new magazine for women, and will be asked to show your copy to some of your rural friends or neighbors, to make them acquainted with it and interested in it.)

The Prize will be awarded to the duly qualified contestants whose answers have the greatest number of correct answers, names, which are considered by the judges to be the best. The contest is open to all persons over 16 (17 years of age in Canada), boys and girls, complete, but not more than six weeks old, by sending your name or household name to the contest office. Send your answers, and try for one of the Big Prizes. YOU may win the \$750 car or the piano, or the pony.



1st Prize Value \$750

BIG PRIZES

- 1st prize—1918 Chevrolet Touring Car, completely equipped—Electric motor, electric lights, speedometer, etc.; value \$750
- 2nd prize—Sweet-toned Eminent Piano; value \$350
- 3rd prize—Lovable Standard Pony and Cart; value \$200
- 4th prize—Gilson Gas Engine (or cash)
- 5th prize—Famous Clare Iron, High Oven Range (or cash)
- 6th prize—Singer Sewing Machine (or cash)
- 7th prize—Standard Cream Separator
- 8th prize—Hoosier Beauty Kitchen Cabinet (or cash)
- 9th prize—High Grade Bicycle (or cash)

And 41 other desirable prizes, including Waltham Watches, 100 Waltham Watches, Roger's Silverplate, Cedar Trunk, Trunk, Trunk, Trunk, Trunk, Gold Brooches and Silver Brooch, Kodak etc. etc. (Cash may be chosen, if preferred.)



1st Prize \$750 Chevrolet Touring Car

MAKE this interesting Contest your entertainment for the autumn event. Let all the family try to solve the pictures. Remember that every qualifying contestant gets a fine reward, or cash, and a chance to win, in addition, one of the Big Prizes—perhaps the Chevrolet Touring Car. Send your answers now—get in first!

Big Complete Price List Sent Free. Address Solutions to

The Contest Editor, RURAL CANADA, 421 Continental Building, Toronto

YOU WILL BE PAID A REWARD OR CASH

EVERY qualified contestant will receive early a valuable reward, or cash, as may be preferred (send in list) for introducing the new magazine, Rural Canada for Women, to some of your friends and neighbors. These rewards, or cash, are in addition to the Big Prizes which may be won.

To begin right now to solve the puzzles, please send in your answers to the puzzle editor, Rural Canada for Women, 421 Continental Building, Toronto.

RULES

- Please observe these simple rules: 1. Write on only one side of the paper. 2. Put your answers on one sheet of paper, with your full name and address (including Mr. or Mrs. or Miss), in the upper right-hand corner. In anything other than this must be judged on a separate sheet. Remember only those over 16 years may compete. 3. Qualified entries will be written up by a committee of three outside judges whose decisions will be accepted as final. 4. Contest closes December 31, 1917. Immediate action will be taken by the judges who award the prizes.



3rd Prize Value \$100



Production alone is not enough . . . skilful marketing makes for profits.

Together they tend toward prosperity every time—for the farmer and for the nation. But most farmers are too busy producing to develop a more profitable marketing system themselves. **Co-operation** is their hope. Together they may organize a selling business which will do it for them. They may then hire a competent manager and secure efficient selling equipment. With careful organization and the application of sound business principles they will bring home the profits. It is worth a trial.

Co-operation is democratic, practicable and profitable.

Organizing for Solid Success

Capital is the first requirement. It is always unwise to venture in any business without sufficient funds. Many of the difficulties are promptly overcome when an adequate supply of capital is available. You can get abundant funds by capitalizing your credit on the joint note plan. Write for particulars.

A RESERVE FUND. No successful business is run without some losses—buildings deteriorate, accidents in shipping occur, unexpected expenses are encountered. Without a reserve fund these demands are difficult to meet, and discouragement and dissatisfaction are liable to ensue. **A reserve fund safeguards any co-operative enterprise.**



Mobilize for Marketing



DIVIDING THE PROFITS must receive careful attention. Profits consist of surplus earnings after overhead charges, running expenses and the reserve is met—in any business. This should be divided among the members according to the business done by them, and each one should share expenses on the same basis. The important point, then, for the member to consider is the difference between the selling price of his produce and the expense involved—his profits—not the price the association can pay him when it receives his goods.

Control by Members

is the distinct feature of the co-operative association

Each member must have but one vote—under any circumstances one vote only. Capital invested must receive a good interest, never any profits. This democratic control and these methods of dividing profits are the only points of difference between the co-operative association and the joint stock company. Otherwise the business must be conducted in exactly the same way if it is to be a permanently successful association.

Bed Rock Business Principles

AN AMPLE MARGIN between prices paid and prices received should be retained to ensure the covering of all costs. The usual margin allowed by successful business in the same line should be retained until the co-operative association proves itself by practical experience to be efficient enough to do the business on a smaller margin.

For general information upon the subject write the Office of the Commissioner of Agriculture for bulletin No. 234—Co-operative Marketing Associations.

The Ontario Department of Agriculture

Parliament Buildings
TORONTO

SIR WM. H. HEARST
Minister of Agriculture

Dr. G. C. CREELMAN
Commissioner of Agriculture



KEEP ACCURATE ACCOUNTS which will show exactly the condition of the business at all times. Careful and accurate book-keeping is of vital importance.

QUALITY OF PRODUCE should be the slogan, and if adhered to will bring success. High-class products sold on their merits make satisfied customers, increase trade and produce profits.

ADVERTISING PAYS in any business. Choose a trade name, give it a reputation for quality, and place it before the public in good advertising mediums. This will increase the demand and widen markets.

THE MANAGER and other servants of the farmer are worthy of their hire. Pay them well and insist upon efficient service. It will ensure their loyalty and best work, and will make the business grow.

GENERAL PRINCIPLES as proper grading, suitable packing, continuous supply, knowledge of markets, etc., must be thoroughly mastered by the manager and fully appreciated by the members.

CO-OPERATION—SOUND IN PRINCIPLE, FEASIBLE IN PRACTICE, should be more generally studied and more widely applied than ever before. The crops this year—and in every year—should be marketed at a reasonable profit to every efficient producer. The interests of the most important class in Ontario, and of the nation, demand it. For full information regarding any of the above or for direct assistance in organizing a co-operative association of any nature in your own community, write the Office of the Commissioner of Agriculture, Parliament Buildings, Toronto.

