

Sixth Annual Special Orchard and Garden Magazine Number

FARM AND DAIRY & RURAL HOME

DEVOTED TO
BETTER FARMING
AND CANADIAN
COUNTRY LIFE

Peterboro, Ont., Mar. 5, 1914



Dairy & Cold Storage
Commits
Dec 14



"WHAT'S WORTH DOING AT ALL, IS WORTH DOING WELL."

ISSUED EACH WEEK

Rural Publishing Co., Ltd., Publishers

ONE DOLLAR A YEAR

FARM AND DAIRY



& RURAL HOME

We Welcome Practical Progressive Ideas

77th Recognized Exponent of Dairying in Canada

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. XXXIII.

FOR WEEK ENDING MARCH 5, 1914

No. 10

Spraying Results in Neglected Orchards

R. S. Duncan, B.S.A., Port Hope, Ont., District Representative for Durham

IN view of the fact that so many of the old orchards in the province of Ontario were being seriously neglected, a campaign for better orchard management was commenced in the spring of 1911 in the counties of Northumberland and Durham. Four demonstration orchards, one each at Colborne, Cobourg, Port Hope, and Newcastle, which had been very badly neglected, were taken in hand for a period of three years to be treated according to the best orchard practices. The orchards were situated near the main road where they could be under observation by passers-by throughout the season so that the results of the demonstrations could be noted.

CONDITION OF ORCHARDS IN 1911

These orchards had been planted some 30 or 40 years, but had been almost totally neglected as to pruning, cultivation, fertilization, and spraying. They had never been sprayed, and hence the quality of the fruit was of a very low grade—the percentage of No. 1's varying from 30 to 60 per cent. They were full of bark lice

the lower branches, and thus economize in picking. In 1913 a lot of small twigs and branches were cut out to open up the trees, thus giving the fruit a better chance to color.

All cuts of one and one-half inches in diameter and over were given a coat of white lead and oil. The rough, loose, shelly bark was scraped off the trees to facilitate spraying operations. The orchards were all manured each year at the rate of 10 to 12 tons of farmyard manure per acre. In two orchards the manure was supplemented by an application of 200 lbs. of muriate of potash and 400 lbs. of acid phosphate per acre.

The orchards were plowed in each year as early in the spring as it was possible to get on the land, and then they received thorough cultivation up to the middle of June, when a cover crop of red clover, buckwheat, or hairy vetch was sown.

The orchards were sprayed very thoroughly three times each year as follows:

First, before or as the leaf bud bursts with



A Result of Good Methods

case breakers, canker worms, bud moths, etc.

Third, immediately after the blossoms fell with commercial lime-sulphur, one to 40 with two pounds arsenate of lead added per 40 gallons mixture to control codling moth and apple scab.

In spraying we used a double acting hand pump and a tank, a home-made affair, holding 200 gallons, with a tower attachment for reaching tall trees. We used two lines of hose and two angle nozzles of the "Friend" type on each line of hose. One man was on the tower equipped with 15 feet of hose and a rod eight feet long; the other man being on the ground with 30 feet of hose and a 10 foot bamboo rod. Two men acted as power on the pump, giving a pressure of from 100 to 150 lbs. All solutions were strained into the tank. The arsenate of lead was first brought into suspension before being strained into the spray tank. We always endeavored to spray with the wind and do as much of the trees as possible.

THE RESULTS

Accurate account has been kept of all expenses pertaining to each orchard in each of the three years. All labor, with the exception of pruning which is valued at two dollars a day, was calculated on the basis of \$1.50 a day per man, and a man and team at \$3 a day. Farmyard manure was valued at \$1 a ton. These figures, it will be agreed, were quite reasonable.

In figuring out the results, no allowance was made for rental of land, as it was difficult to arrive at a fair valuation of the orchard; it differs in different localities. No account was taken of the interest on the investment or overhead charges, nor depreciation in value of the implements used.

I append herewith a tabulated statement of the expenses and receipts for the orchard of Mr. F.



A Demonstration in a Neglected Orchard that has Since Yielded Splendid Returns

The orchard of F. W. McConnell, Northumberland Co., Ont., in which this group of farmers and fruit growers gathered to learn something of the doctrine of better fruit, yielded a net profit of \$25 an acre after it came into the hands of the district representative, who conducted it as a demonstration orchard. Similar satisfactory results were achieved in other neglected and unprofitable orchards by the application of the same methods. Mr. R. S. Duncan, who had the work in hand, tells of how the results were achieved in the article adjoining.

TREATMENT
The orchards of S. Duncan, who had the work in hand, were all pruned

in 1911, not very severely, but more of a cutting out of the dead wood and a thinning out of the top. In 1912 the greater number of the high trees were "dehorned," as much as 12 feet being taken off. Our object in doing this was to make a more spreading tree, have the fruit borne on

commercial lime-sulphur, one to 10 to control oyster shell bark louse and leaf blister mite.

Second, just before the blossoms opened with commercial lime-sulphur, one to 35 with two pounds of arsenate of lead added per 40 gallons of mixture to control apple scab, caterpillars,

W. McConnell as Colborne, in each of the past three years. The number of barrels, the percentage of No. 1 apples and the receipts are also given for the three years previous to our taking charge. This will be a basis of comparison between the orchard when in a neglected condition and after being properly cared for

NORTHAMPTON AND DURHAM DEMONSTRATION ORCHARDS

F. W. McConnell's Orchard, Colborne, 137 trees—approximately 2½ acres. Soil—Light sandy loam. Orchard 32 years old

RESULTS

	After cared for		
	1911	1912	1913
EXPENSES—			
Scraping	\$11.25	\$52.00	\$39.00
Pruning	34.00	7.65	4.00
Painting wounds	10.25	4.00	4.50
Gathering brush	6.75	4.00	4.50
SPRAYING—			
First	25.90	21.90	20.55
Second	16.75	15.70	15.15
Third	23.17	22.35	16.60
Centering holes in trees	1.35		
Bracing trees with wire	1.37		
Removing dead wood and thinning suckers	90	1.80	
FERTILIZER—			
Manure	28.00	30.00	30.00
500 lbs. Muriate of Potash	15.00	11.70	12.60
1,000 lbs. Acid Phosphate	11.00	11.00	16.00
Applying	1.00	1.00	1.00
Freight		2.75	
Cultivation	7.50	18.00	5.70
Total expenses	202.60	178.22	174.63
Expenses per acre	81.04	71.29	69.85
Yield in barrels	331	332½	234
Receipts from sale of apples	\$740.55	\$449.80	\$483.58
Per cent. No. 1's	47.6	40.5	42.5
Net profit	537.95	271.58	313.95
Net profit per acre	215.18	108.63	127.58
In neglected state			
	1909	1909	1910
Yield in barrels	300	250	75
Receipts from sale of apples	\$300.00	\$200.00	\$100.00
Per cent. No. 1's	30.60	30.60	30.60



Favored by Growers in Eastern Canada.—The Open Centre Type of Tree

Figures from the other orchards could be given, but the foregoing will be sufficient to show in detail the expenses and returns.

The results obtained were in striking contrast to the small and indifferent crops yielded in unsprayed and uncared for orchards of the same locality. The quality of the fruit in each of the three years was exceptionally high—the percent-

age of number one's being raised from 30 to 60 in 1908, 1909, and 1910, prior to our having charge, to 75 to 87.6 per cent. while under our care. Further, from 76 to 98 per cent. of all the apples grown in these orchards was absolutely free from any insect pest or fungus disease. Scarcely an apple could be found with a worm in it, and it was only an odd apple here and there that showed a spot of scab.

In conclusion, let me say that as a result of these demonstrations the old orchards are being cared for in a manner as never before. Carloads of spray material and a great number of spray machines, both hand and power outfits, have been sold to fruit growers in the counties. The demonstration orchard method has proved its effectiveness as a means of stimulating interest in up-to-date methods, and inspiring a new respect for abandoned orchards.

Benefits of Winter and Summer Pruning Compared

Dr. C. D. Jarvis, Conn. Agricultural College (Formerly of the Guelph Agricultural College)

PRUNING is a natural process. It may be observed on both fruit and forest trees. In the struggle to exist the weaker branches, or those unfavorably located, die and drop off. An attempt, often successful, to heal the wound takes place. The modern practice of pruning is an attempt to assist nature and to improve upon her crude methods.

In the pruning of the apple tree there are two distinct styles or ideals, the central leader type and the open centre type, each with its crops of

*Extracts from an address delivered before the Massachusetts Fruit Growers Association



A Type of Apple Tree that Finds much Favor with Western Fruit Growers

In pruning their apple tree growers work for one of two distinct types. The type here illustrated, known as the Central Leader type, is much favored by Western fruit growers on the ground that it is a stronger structure than the open centre type illustrated above, and not so likely to be broken down by wind and heavy crops of fruit.

adherents. There are many supporters of the central leader type among the western growers, and they claim that a tree pruned in this form makes a stronger structure and is not so likely to be broken down by wind and heavy crops of fruit. This is a strong argument and cannot be ignored. A tree of this type, however, is inclined to grow too high and completely shuts out the light from the centre of the tree.

The open-centre type of tree is the one most commonly found in the commercial orchards of the east. For New England, where the maximum amount of sunshine

is necessary to develop fruit of high color, this seems to be the most desirable type. If carefully grown and properly trained, and if the trees are not allowed to overbear, there is not likely to be much breaking of the branches.

In order to develop a strong open-centre habit, we must have a good nursery tree to start with. We hear a great deal nowadays about the desirability of growing low-headed trees, and I am a strong advocate of such practice, but I do not believe in heading them so low that there is no room for the proper distribution of the main or scaffold limbs of the tree.

Many nurserymen are making a mistake in "rubbing" their trees too high; by this I mean that all the buds and shoots are rubbed off from the yearling tree to a point six or eight inches below the point where the tree is headed in. If the practice is to head a tree 30 inches from the ground, the "rubbing" should not extend more than 12 inches from the ground, leaving a space of 18 inches for the proper distribution of the scaffold limbs of which there should be from three to five. These should be fairly evenly spaced along the central axis and no more than one should be allowed to develop at the same point.

An apple tree is a wonderfully tractable object when handled properly. The man who follows the ordinary practice of severely pruning in the dormant season only, is going to have trouble, for the more we prune at this season of the year the more persistent the tree becomes. To encourage the development of the weaker growing branches and to check the persistence of the stronger ones, it is necessary to do some pruning during the growing season.

I believe that in the past we have grown our trees too fast and have pruned them a great deal too much. To develop a strong fruit-bearing structure, a tree should not be unduly forced. It may be observed that with trees that have made a normal growth the branches are more tapering and more rigid than those on rapidly grown trees. The excessive growth is frequently due to liberal fertilization and cultivation, but is just as often due to severe winter pruning.

During the past six years I have had under observation a young orchard that has been developed under various systems of pruning, and I am forced to state that the best shaped trees in the orchard to-day are those that have not been pruned since they were planted. Now, we should not deduce from this that under all conditions a young tree should not be pruned. These trees were Baldwin and McIntosh, and were

(Continued on page 34)

Thir
M AN
pe
ham coun
60 cents
anyway, a
off, wh
ground th
By thine
value ther
entire pac
tensive ap
county, a
are selling
In 1912
our demor
in Northu
selected.
the size o
with thin
from lad
clusters t
close eno
or in such
a limb of
apples or
that of t
ning was
matured i
been mad
The res
ditions w
Thinne
quarters
cultivat
Unthin
three bar
barrels of
In an o
another
Duchess
as with t
ones; th
Six un
ones; t
barrel of
In this
more th
barrels o
the numb
ed color,
at all. T
at the r
three bot
hour be
will be s
was larg
unthine
The ve
the incr
ber ones
sold to a
number
very litt
this worl
sold thro
pro-rat
is done
Growers
is at on
of the tw
tioned.
ber one
Ass
for the

Thinning the Apple Crop is Profitable

Justus Miller, O.A.C., Guelph

MANy think that thinning is a very expensive operation. In our demonstration orchards in Northumberland and Durham counties we have thinned trees at a cost of 60 cents a tree. These apples had to be picked anyway, and it was much cheaper to strip them off when small and allow them to fall to the ground than to pick and pack them in the fall.

By thinning, the percentage of culls is reduced very greatly. These are not only of small value themselves, but they lower the value of the entire pack. Considering the increased value of number ones resulting, P. C. Dempsey, an extensive apple grower of Trenton, Northumberland county, argues that the culls thus taken away are selling really at \$9 a barrel.

In 1912 experiments were conducted in two of our demonstration orchards. In one at Colborne, in Northumberland county, a few Snow trees were selected. The apples were thinned when about the size of hickory nuts. They were taken off with thinning shears and all the work was done from ladders. The intention was to thin all clusters to one specimen and to leave no apples close enough together so as to touch each other or in such a position that they would rub against a limb or a twig when mature. The quality of apples on thinned trees was much superior to that of those on unthinned trees. But the thinning was not severe enough. When the apples matured it was found that full allowance had not been made for their increase in size.

The result from two trees under identical conditions was:

Thinned tree—Six barrels number ones; three-quarters barrel number twos, and one peck of culls.

Unthinned tree—Three barrels number ones; three barrels number twos, and two and a half barrels of culls.

In an orchard at Welcome, in Durham county, another experiment was made, this time with Duchess apples. The same methods were used as with the Snows. The results were:

Six thinned trees—Seventeen barrels number ones; three barrels number twos, no culls.

Six unthinned trees—Twelve barrels number ones; twelve barrels number twos, and one-half barrel of culls.

In this case the thinning should have been more thorough and more severe also. The three barrels of number twos equalled the number ones in size, but lacked color, and there were no culls at all. These trees were thinned at the rate of 60 cents a tree, three hours' labor at 20 cents an hour being expended on each. It will be seen that the total crop was larger in the case of the unthinned trees.

The value of thinning rests in the increased percentage of number ones. If the entire crop is sold to a buyer at a flat rate for number ones and twos, there is very little profit in undertaking this work. But if the apples are sold through associations and are pro-rated according to class, as is done by the Norfolk Fruit Growers' Association, the profit is at once apparent. Consider the two Snow trees already mentioned. The 1912 price for number one Snows paid by the Norfolk Association was \$3.10, and for the number twos \$2. The

profit per tree would be something as follows:

Thinned tree—Six barrels number ones at \$3.10, equals \$18.60; three-quarters of a barrel number twos at \$2, \$1.50; cost of thinning, 60 cents; total, \$19.50.

Unthinned tree—Three barrels number ones at \$3.10, \$9.30; three barrels number twos at \$2, \$6; total, \$15.30; profit, excluding culls, \$4.20.

Tile Draining in Winter

Joseph Tweedle, Wentworth Co., Ont.

Tile draining is the one thing most needed on the average Canadian farm, but the great shortage of labor leaves no possible chance to attend to this work except in winter. It does not appear to have occurred to the average farmer that it is possible to do this work in winter, but as a result of careful study, I have been able to continue the work till midwinter and find it possible under ordinary circumstances, to operate throughout the entire winter.

It has been our practice to lay out the drains and plow out a deep double furrow before winter sets in. Having the surface well drained I proceed to protect the drain from freezing by covering it with a little coarse manure, of which a good load will protect a long stretch of ditch. This class of work, owing to the vigorous exercise, is not uncomfortable in moderately cold weather. It is very healthy and provides work for the winter months thus enabling the farmer to keep a better class of labor.

A good, strong sub-soil plow is used after the ditch has been opened. It stirs up the subsoil to a depth of 10 or 12 inches. This is done by going two or three rounds with a good steady team, using a six or eight foot double tree, which makes it safe for the horses, and prevents damage to the ditch. This provides for the use of unskilled labor under the farmer's superintendence in shovelling out the loose earth. Repeat the sub-soiling and shovelling until the desired depth is secured. This



A Duchess Tree After Thinning

This tree was in one of the demonstration orchards in Durham county, Ont., where experiments in thinning showed a profit of over four dollars a tree in favor of thinning.

makes a very cheap method of carrying out the work.

I have succeeded in cutting four and a half feet deep by lengthening the chain from the horses to the plow making a ditch not over 18 inches wide at the surface and four to six inches at the bottom. This has been done in the very hardest of dry clay and only nine inches wide at the surface, where two and a half feet in depth was required. This method moves the minimum of earth and gives plenty of room for laying the tile. The same method applies to filling the ditch. Most beginners make the mistake of making too wide a ditch. This entails double labor both in digging and filling.

Profitable Results from Cherries

C. Pettingill, Prince Edward Co., Ont.

MY cherry orchard consists of 150 trees planted 100 trees to the acre. All are in bearing, the Montmorency and Richmond varieties comprising the whole. Last year I had 1,100

11-quart baskets. We consigned to the Ottawa market most largely and realized, on our crop about \$1,000.

We have an advantage in this section of the country in the picking of our crop. Just at the season when cherries are ripening the canning factories are idle and canning factory help can be had at \$1 a day all through the cherry picking season. This comes to about 10c a basket. As more people get into cherries there will be a greater demand for pickers and we may not be able to get our help so cheaply.

I have every basket of cherries sorted as they are brought in from the orchard and in every basket I place a written guarantee that the fruit is all No. 1, and not a rotten cherry in the package.

My trees are 15 years old and just in their prime. They afford me a golden harvest. Cherry planting, however, is now being carried on extensively here and elsewhere, and it may be that in a few years we will see over-production of this fruit.



A Productive Orchard Such as is Characteristic of the Niagara District of Ontario

Are Apple Orchards Over Planted?

IS there a danger of over production of apples in Canada? This question was most seriously discussed at the last annual meeting of the Ontario Fruit Growers' Association and at many gatherings of apple growers since. Farm and Dairy readers have been asking the same question. To place a dependable view of the situation before Farm and Dairy readers, six leading authorities have given their opinions for publication in this Special Horticultural Number. A study of the conclusions of these men should afford an accurate guide to the prospective planter.

MR. KYDD'S OPINION

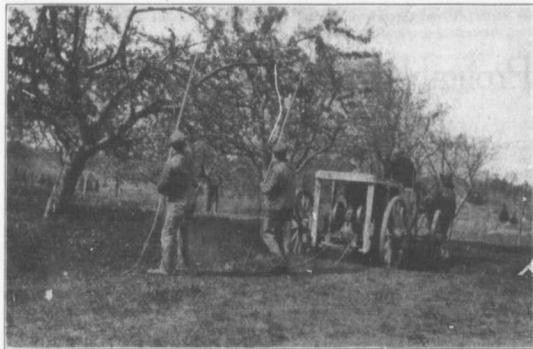
"If the planter is a fruit man, knows how to care for his trees, and is well posted about the marketing of his apples, it is a safe proposition to plant certain varieties," writes W. F. Kydd, of the Fruit Branch, Toronto. "From figures we see printed telling of the many acres of apple trees planted, and not yet bearing, we may expect keener competition in the future than it has been in the past.

"Many trees planted will not be cared for. It will be a survival of the fittest. We have as suitable land in Ontario for apples as any part of the continent, and I feel sure we can produce apples as cheaply in this province as elsewhere. I would plant only apples of good quality—mostly for dessert purposes. If over-planting has been done at all, it is in the poorer quality varieties. Our highest quality apples, thoroughly cared for, properly graded and packed, will compare favorably with any apples grown."

IMPORTANCE OF VARIETY

Mr. Elmer Lick, manager of the Oshawa Fruit Growers' Association, is of the same opinion as Mr. Kydd. He writes Farm and Dairy as follows:

"If right varieties of high color and flavor,



Up-to-Date Methods Minimize the Danger of Over Production of Fruit

Is there a danger of an over-production of fruit in Canada? This question, asked by Farm and Dairy, is answered by several well-known authorities in the adjoining article. Notice that all agree that the more thorough the orchard methods and the better the fruit, the less the danger of over-production. These Nova Scotia growers are doing their share to produce this high-class fruit.

covering the various seasons of the year, are planted in suitable soil, and varieties suitable to the climate were grown, I believe apple growing will continue to pay good returns for the time and interest given to the apple orchard. Apple orchards of Penuakee, Mann, and a large number of even good varieties which do not appear attractive to the purchaser, will never pay very well in the future except in years of great scarcity.

"I have heard for 40 years," adds Mr. Lick,

"that apple growing would soon be unprofitable, owing to large plantations coming into bearing. There is a danger of a large crop in the near future, causing a glut, if markets are not extended. The remedy is, when the big crop comes to eliminate every expense possible and put the best apples in the hands of the consumers at the lowest price possible. This will extend the market, and also check the grower under unfavorable conditions."

The next testimony is that of an apple buyer on an extensive scale, Mr. R. J. Graham, of Belleville, Ont., writes:

"The planting of apple orchards," writes Mr. Graham, "depends entirely on the grade and variety of apples produced. There is no limit in reason to the market available for apples of first-class quality, put up in fine condition, of popular varieties. Ontario has lost its most valuable market, namely the North West trade, by shipping apples of inferior quality, poorly graded. The Pacific Coast box apples have driven us out of the market and are actively operating in the European markets to-day.

"If our apple growers will spend the money to grow first class fruit and take care of it, the business will never be over done, but we have entirely too much poor fruit, too many neglected orchards with extremely bad management. It is commercial suicide to plant orchards unless the owner is able and intends to devote the time and money necessary to properly take care of the trees, spray and thin the fruit, and prepare it for market himself."

Another of the six experts is P. J. Carey, Dominion Fruit Inspector. Mr. Carey's answer is: "Yes, and No. Yes, if all kinds of second and third rate varieties are planted indiscriminately, under all kinds of conditions. No, if none but the



Another Reward of Good Methods

Well loaded trees, healthy and vigorous, such as this one in the Curtis Orchard of Norfolk Co., Ont., do not happen by chance. They are the reward of careful pruning, thorough spraying, constant cultivation and proper fertilization.

orchards is being over done in one way," writes P. C. Dempsey, of Trenton. "Many large plantations have been set, so many that when all old and new orchards bear, apples will be very cheap, and the market will take only the very best. This will make keen competition for all, and it will tend to put the man operating on high priced land at narrow margins out of the business. The planting has been done in few varieties and often not of the best so that cheaper apples must come as they have been coming since the younger orchards have started bearing.

"Proofs of over planting are seen in the fact that people believe they have planted enough, which is indicated by this season's slump in nursery stock. The fact that the Northumberland and Durham apple growers have this year given away books showing new uses for apples proves that they think new outlets must be found for crops in even average years. All these indicate that it is well for the intending investor to consider well the probable over production and his ability to produce and sell cheaply and well before going heavily into the apple business."

Mr. Harold Jones, well known all through the St. Lawrence Valley, sums up the situation as follows:

"In the counties bordering along the St. Lawrence Valley and west to Belleville, there has been no great increase in orchard planting, and the supply has never equalled the demand throughout the season. The counties bordering Lake Ontario have certainly planted very largely, and there is danger in the near future of over-production under present conditions of distribution.

"What I certainly think one of the greatest dangers to the apple trade is the over production of low grade and undesirable varieties and the ever increasing quality of poor rubbish pushed on the market, which has a depressing effect on trade and curtails consumption. 'What sells first sells best,' is a true saying, and every grower and dealer knows that his Spys will always sell first and best, and this variety is often held to help sell the less desirable sorts. There is an ever increasing demand for Golden Russets in the English markets and the planting of this variety has been recently neglected.

Dairy Farming and Fruit Growing Combined

MR. R. W. IRELAND of Prince Edward Co., Ont., has not all of his eggs in one basket. He has two strings to his bow. It is difficult to determine whether Mr. Ireland is more fruit grower than dairy farmer, or more dairyman than fruit man. He is prosecuting both branches of farming on an extensive scale and with marked success. So successful has Mr. Ireland been in these two branches that his fame has gone abroad beyond the limits of his own county, and hearing of his success an editor of Farm and Dairy recently took occasion to call on Mr. Ireland on his farm near the pretty village of Wellington.



Mr. R. W. Ireland in His Orchard

"I find that dairying and fruit growing make an ideal combination," said Mr. Ireland. "The big crops that we have been having in our orchard takes a lot out of the soil. The cheapest way and the best way to return that fertility is in the stable manure. We could not get along without our cows. There may be more money in the fruit, but I like the cows, and running the two together there is more money all around."

The Ireland homestead consists of 260 acres, all but 20 acres of which is under cultivation. The soil is a rather light loam. Mr. Ireland's orchard consists of 42 acres of apples all in full bearing, and eight acres of pears. With such a large acreage of apples Mr. Ireland is fortunate in that two-thirds of the trees are of that desirable standard variety, the Spy. The remaining one-third is made up of Cranberry Pippin, Rhode Island Greening, Golden Russet and Baldwin. The balance of the farm is devoted to the production of crops for the feeding of the dairy herd.

"Are you Spies in one solid block?" we asked Mr. Ireland.

"There are a great many trees in solid blocks, but the orchard is fairly well interspersed with trees of other varieties, which are self-fertilizing," was the reply. "While our trees always seem to be well fertilized I consider that inter-planting for fertilization a good idea and a desirable safeguard."

Mr. Ireland has been on his present farm but three years and has taken three crops from his orchard. He formerly farmed near Brighton,

marked he, "we thought we would spread out a little. This place that we now own was then for sale, but before I could get here to inspect it, it had been sold to a man in Norfolk county. I liked the place so well and saw so many possibilities in it that I gave the Norfolk county gentleman a couple of thousand dollars on his purchase price, and moved in immediately."

FIRST CROP HALF PAYS FOR FARM

Mr. Ireland did not tell us how much he paid for the farm, but we were given to understand by neighbors that the price was in the neighborhood of \$15,000 to \$16,000. That Mr. Ireland was far-sighted in his purchase was

proved when he harvested his first crop. The crop was large and the price favorable. The 4,230 barrels of apples were sold for \$2 a bbl. on the tree, the buyer doing the picking and packing, the only expense to which Mr. Ireland was put being the hauling of the apples two and one-half miles to the near-by station at Wellington. In other words the first crop more than half paid for the farm.

The year 1912 was an unfortunate one for apple growers, as all will remember. It was a good year for an orchard to take a rest, and this is exactly what Mr. Ireland's orchard did. The crop harvested was only 1,500 bbls., which were sold for \$1,500. The third crop, last year, amounted to 2,100 bbls., on which Mr. Ireland had over \$4,000 to the good after the expense of furnishing the barrels and packing the fruit had been met.

Methods that have brought such signal success are of more than passing interest. Thorough spraying is one practice strongly emphasized in the Ireland orchards. Lime sulphur is the spraying material used. The first application is used in the strength of one gallon of the commercial mixture to eight gallons of water. This spraying is made in the spring, when the trees are dormant. Enough mixture is applied to thoroughly drench every twig of every tree.

"Not a few farmers around here left out of this first spraying last year," said Mr. Ireland. "It is the most expensive spraying and to the uninitiated is apt to appear the least important. Last year, however, the first important and those who neglected it had poor fruit."

The second spraying is made just as the blossoms

are swelling, this spraying being directed to the bud moth, and the strength of the solution is one to 35. The third spraying, for colling moth, Mr. Ireland makes just as the blossoms fall with a special emphasis placed on having the spray made immediately, before the calyx has a chance to close.

"Three years ago," said Mr. Ireland, "every tree in our orchard was free from wormy fruit except one Spy tree. It was decidedly wormy. I asked my wife about it, and she said that she had noticed that at the third spraying this tree had been missed. It was in a corner difficult to reach with a full spray tank, and the boys admitted that they had passed it over. A great many of the apples on this tree fell to the ground. The most of the remainder were wormy. This is the best lesson that I have ever had on the importance of spraying thoroughly."

Mr. Ireland is not an advocate of the plow in the orchard. "Our orchard," said he "is a loam, and we get on it very early in the spring with the riding cultivator. It is with this implement that we do most of the work in the orchard. We hardly ever plow. Right from the first cultivation of the spring we aim to keep a fine soil mulch over all the orchard, which holds the moisture in the earth and absorbs the rains. We cultivate continuously until the middle of July. Then we sow Graystone turnips, about two pounds to the acre. A few of these turnips we feed in the



Part of a Dairy Herd that Averages 8,000 lbs. of Milk a Year

The owner of this herd of grade Holsteins, Mr. R. W. Ireland, is a progressive dairymen as well as a successful fruit grower. The dairy herd numbers 24 milk cows.

All photos by an editor of Farm and Dairy.

fall to the dairy cows. The great proportion of them we allow to go back into the ground."

Like most large orchardists, Mr. Ireland prefers to market his own crop. "The cooperative society is the only way for the small orchardist to market apples and it is for the small man that the cooperative society is intended," explained Mr. Ireland. "I have always advocated cooperation for such marketing. With a crop as large as ours, however, we can attract as good a market as an ordinary cooperative society and it is just as important for us to pack honestly and according to the provisions of the Fruit Marks Act as for the society to do so. Another factor that has deterred us from entering the local society is that our apples are largely Spies, whereas the society receives inferior varieties, such as the Baldwin, and so far they have been pooling all varieties."

The dairy end of Mr. Ireland's farm is as well managed as the fruit end and Mr. Ireland has always been the largest shipper of milk to the Cloverdale cheese factory, of which he has recently been elected president. Through the past winter the milk has been shipped to Toronto at \$1.75 a cwt., Mr. Ireland paying the express charge of 20 cts. a can. When visited by an editor of Farm and Dairy, the dairy herd consisted of 24 Holstein cows and 11 calves. They are all grade 24-months, largely from Mr. Ireland's own breeding. More about this end of Mr. Ireland's business will be given in Farm and Dairy next week.



A Small Portion of a Splendid 50-Acre Orchard

On his combined fruit and dairy farm in Prince Edward Co., Ont., Mr. R. W. Ireland has 42 acres of apple orchard and eight acres of pears. In one year Mr. Ireland realized \$6,000 from his apples alone. He also has a profitable dairy herd. Read his story in the article adjoining.

where he had 100 acres of land and carried 12 cows and 15 acres of orchard. "When we got our farm paid for and had a little to the good," re-

Give Me a Chance to Prove My Flour

IT is our intention to make Cream of the West flour the best known and most used flour in Ontario. With this in view we make

Special Prices Direct

to the farmers of Ontario. We want you to try this flour. When you do so we believe you will always use Cream of the West flour and no other. In order to make it well worth your while to give this splendid flour a trial we make it easy for you to buy our flour and feed products direct from the mills at special prices. Read this list:

FLOURS	per 98-lb. bag.
Cream of the West (for bread)	\$2 80
Queen City (Blended for all purposes)	2 40
Monarch (makes delicious pastry)	2 35



YES, madam, I am the Cream of the West miller. I know what a strong flour is. I say you ought to know the extra breadmaking qualities of

Cream of the West Flour

The hard wheat flour that is guaranteed for bread

FEEDS	Per 100-lb. bag.
"Bullrush" Bran	\$1 30
"Bullrush" Middlings	1 40
Extra White Middlings	1 50
"Tower" Feed Flour	1 60
"Cam" Feed Flour	1 75
Whole Manitoba Oats	1 50
"Bullrush" Crushed Oats	1 55
Whole Corn	1 45
Feed Cornmeal	1 50
Cracked Corn	1 55
"Geneva" Coarse Feed	1 60
Manitoba Feed Barley	1 40
Barley Meal	1 45
Oil Cake Meal (old process)	1 70

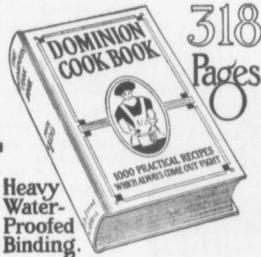
TERMS

Cash with order

Orders may assorted as desired. On shipments up to 5 bags buyer pays freight charges. On shipments over 5 bags we will prepay freight to any station in Ontario, east of Sudbury and south of North Bay. West of Sudbury add to above prices 10 cents per bag; to points on T. & N. O line add 15 cents per bag to cover extra freight charges. Make remittances by express or post office money order, payable at par at Toronto. Prices subject to market changes.

Special Prices on Carlots
Correspondence with Farmers' Clubs Solicited

Note.—If you have already secured the book illustrated above, write us for list of books by Ralph Connor, Marion Keith, J. J. Bell and other Canadian authors, from which you can make further free selections in buying flour.



THE book illustrated, below is one of the most complete household books of its kind ever prepared. Every home in Ontario should have this splendid household help and guide.

Household Book Free

For the purpose of making Cream of the West flour better known throughout the Province, we make you a very special offer by which you can get this household book free.

The household book contains 1,000 recipes—the most practical collection ever brought together. The book is a well-known work. The recipes always come out right, and they are just the kind of recipes you want in your home. They are easy to use and the delightful dishes they make are not expensive.

Every cook of cookery is dealt with comprehensively. With this book you can cook everything from the simplest to the most elaborate dishes.

Full instructions how to carve meats and games, with a number of helpful illustrations.

Besides, there is a large section devoted to useful medical knowledge, a feature which alone makes this book most desirable for your home. It tells you how to deal with accidents, bruises, burns, colds, coughs, headaches, fractures, diphtheria, whooping cough, and the many more serious ills that come suddenly and find you helpless unless you have first-hand advice.

Get this book. Read carefully the easy terms of this offer. The book is free. See how simple it is to get it.

How to Get the Household Book Free

With every purchase from us of not less than three (3) bags of Campbell's Flour (any brand) you will get Household Book free; but bear in mind that if you order up to five (5) bags we will pay the freight to any station in Ontario, east of Sudbury and south of North Bay (see terms above). To get the book at least 3 bags must be flour—the other two bags may be flour or any other product mentioned in the list printed above. Read the list and make up an order to-day. Add 10 cents to your remittance to cover postage and wrapping of book.

THE SALES MANAGER
The Campbell Flour Mills Company, (West) Toronto

Spraying Methods in a Great Orchard

A GOODLY number of years ago W. H. Gibson, Durham Co., Ont., went orchard crazy; at least that is what his neighbors said. He announced his intention of planting 25 acres to apple trees. All who had his best interests at heart pleaded with the headstrong young man to have some common sense, that such a quantity of fruit would glut the market and could not possibly be profitable. But W. H. Gibson had his way.

Hardly was the first orchard of 25 acres well started before Mr. Gibson gave his neighbors a second shock by announcing his intention of setting still another 25 acres, and this was quickly followed by a third installment of 25 acres. Mr. Gibson's orchard is now one of the largest in Canada. The spraying methods of this progressive orchardist, as told by himself, will be of interest. Here they are:

THREE OR FOUR SPRAYINGS THE RULE
 "I give three to four sprayings. The first spraying, as the buds are swelling, is with Lime-Sulphur for blister mite, oyster-mark louse, etc. I give the second spraying as the blossom buds are swelling. This too is with Lime-Sulphur diluted, or with Bordeaux and Paris Green. As soon as the blossoms have fallen I give the third spraying with diluted Lime-Sulphur or Bordeaux. Here I prefer

the Bordeaux to control fungous. "When the apples are the size of marbles I give a last touch with Bordeaux and Paris Green. I avoid serious russeting by using an excess of lime. It is worth while testing the Bordeaux with Ferrocyanide of Potassium and add lime after the test proves out.

"As to the amount of spraying material to use for each tree to spray thoroughly, I would consider from my own experience, that 10 gallons of Lime-Sulphur would be necessary for one tree 25 years old in full bearing, but three to four gallons of Bordeaux mixture would be sufficient.

"Comparing the cost of the two mixtures I would estimate 1,000 gallons a day's work for a power machine, costing, with Lime-Sulphur and Arsenic, \$5.10 for the Lime-Sulphur and \$8.40 for the Lead, or \$13.50 for material. This would spray about 100 trees.

"If using Bordeaux mixture I would use three pounds Sulphate of Copper to 40 gallons and six pounds of lime. This would amount to 75 lbs. bluestone and three bushels lime to make 1,000 gallons of spray liquid. This would cost \$5 for the bluestone, \$1 for the lime, and \$2 for the necessary Paris Green. Consequently 1,000 gallons of Bordeaux would cost \$8, and would thoroughly spray about 300 trees in one day with a good power machine.

"Estimating the time of two men and a team and use of machine at \$10 a day, I find it costs to spray with Lime-Sulphur, for material and labor to apply 1,000 gallons in one day \$23.50. This will do only 100 trees thoroughly, at a cost of 23½ cts. a tree. If not sprayed thoroughly the farmer might as well go fishing, which is pleasanter than half spraying and not getting results.

"If using Bordeaux and Paris Green I find three to four gallons a tree each spraying sufficient to give good results. And have had splendid success with this application every year for the past 15 years. This will cost for the 1,000 gallons of material and day's labor \$15, which will be sufficient for 300 trees, costing six cents a tree; about one-quarter the cost of Lime-Sulphur.

"As the average farmer has no surplus of men and has other farm work waiting, it is important to use the mixture which will do the work in the quickest time, providing equal-



If it's for a Permanent Job, put up

Frost Fence

There are several factors that make FROST FENCE the permanent fence.

The starting point of any fence is the wire used. We are not satisfied to take the assurance of any wire manufacturers in the country. We make our own wire, and every foot of it is best full-gauge No. 9 Hard Steel Wire. That's why we can make strong claims for FROST FENCE durability.

We give this high-quality wire an extra heavy galvanizing of an even thickness throughout. That accounts for the way FROST FENCE resists rust and weather year after year.

As the finishing touch to a perfect fence, we use the famous FROST Lock, that wraps around both stays and laterals with a never-giving grip, ending in a doubly secure twist below.

Any FROST Dealer can give you more facts and show you more proof.

Write us direct if you can't get FROST FENCE. We may need an agent in your district.

Frost Wire Fence Co., Ltd.

HAMILTON - ONTARIO

KEITH'S FARM SEEDS

Headquarters for
CLOVERS, GRASSES

We pay freight on Railways in Ontario for orders made up of 150 lbs., or more of Clovers and Timothy.

Keith's Best

Clovers and Timothy
 Gold Brand Alfalfa, No. 1 Gov't Standard, is the choicest grade of Northern Crown Alfalfa, \$10.25 per bushel. Our seed is obtained from Siberia, where the plants have endured the extreme cold of hard winters.

Sun Brand Red Clover, No. 1 Gov't Standard, is the best obtainable, regardless of cost. We invite comparison, \$12.00 per bushel.

Diamond Brand Timothy, No. 1 Gov't Standard, choicest grade of strictly fancy Timothy on the market. Grades Extra No. 1 for purity. \$4.25 per bushel.

Ocean Brand Alsike, Very fancy sample, No. 1 Gov't Standard, \$13.00 per bushel.

Sun Brand Mammoth Clover, No. 1 Gov't Standard, \$12.00 per bushel.

Sweet Clover, White Blossom, 25c per lb.

Sweet Clover, Yellow Blossom, 15c per lb.

Keith's Near Best

Clovers and Timothy
 Silver Brand Alfalfa, No. 1 Gov't Standard, \$9.25 per bushel.

Moon Brand Red Clover, No. 2 Gov't Standard, \$11.00 per bushel.

Colored seed contains odd varieties.

Resident Brand Timothy, No. 2 Gov't Standard, grades Extra No. 1, \$4.00 per bushel. Clean enough for any farm.

Sea Brand Alsike, No. 2 Gov't Standard, \$11.00 per bushel.

Allow 30c each for cotton bags.

O.A.C. No. 72 Oats

We feel confident that we have the purest and best quality of this variety that can be got—No. 72 Oats. If you find any—We want you to send the Oats back, \$3.00 per bushel, 5 bushels Oats back, \$3.00 per bushel. Bags Free or over, \$2.75 per bushel.

GEO. KEITH & SONS

Seed Merchants since 1866

124 King St. East - TORONTO

Ask for Catalogue

Good Living from Bees, Fruit and Potatoes

R. S. Dunoon, B.S.A., Port Hope, Ont.

MR. G. H. Martyn & Son, fruit growers, of Fairview Farm, Port Hope, have demonstrated what can be done in the way of successful farming. Twelve years ago, Mr. Martyn bought his present farm which was then practically abandoned. The buildings were almost a complete wreck. To-day the farm is one of the most complete to be found in Ontario. The trees have been remodelled, the land is in a high state of cultivation, and eight to nine acres of new orchard have been planted, making a total of 13 to 14 acres in all. Mr. Martyn attributes his success largely to the fact that he has been specializing; his three special lines being the orchard, the apiary, and early potatoes.

Every spring Mr. Martyn begins the season with 30 to 40 colonies of bees. On these he clears \$100 to \$200 annually. There is no disease in his hives, and they require comparatively little work for the returns received.

ly good results are obtained. By testing he can find which gives the best results under his own methods, and then stick to the mixture which suits him the best. Then with confidence use the same spray every season. Be thorough and success is certain."

and although somewhat low yielders they bring high prices. Last year about 2,000 boxes were sold for approximately \$186.

For seven years potatoes have proved a great source of revenue. Mr. Martyn grows the early varieties chiefly, and never has enough to supply the demand, receiving high prices for his crop. Consistent spraying is practised with this crop. Last year, although blight was very bad in the district, spraying practically saved Mr. Martyn's entire crop. His success shows the advantage of specialization.

Potato Sprays and Spraying

M. B. Davis, B.S.A., Annapolis Co., N.S.

Spraying potatoes is an important subject. This operation must be conducted in a thorough manner to control the potato bug and the potato blight. The following spray is a good combined fungicide and insecticide: Lime, four pounds; copper sulphate, six pounds; water, 40 gallons; arsenate of lead, two pounds.

The foregoing mixture is made the same as the four forty Bordeaux, and should be applied as soon as the plants attain four or five inches in height. Spraying must be continued as the plants grow and produce new surface for the ravages of the bug and the blight. If you spray often and well, nothing need be feared from either of these diseases.

Profit and Pleasure from the Farm Garden

Johnson Andrews, Hastings Co., Ont.

IF there is anything that fills my soul with pity for a fellow man it is to find him eating salt pork and potatoes in the summer. I can appreciate his position, for I was there myself until I got a town girl for my wife. She remembered the garden that they had always had in the tiny back yard and did not see why we should not have a far better garden on the farm, and really have good things for the table all summer. Funny, isn't it? A town girl teaching a farmer how to make a garden! But that was the position in which I found myself. Now our table is supplied with every variety of the green truck, such as you find on the table of the city millionaire. We are healthier and happier than before a good garden became a regular institution on the farm.

We have already taken the initial step toward our garden of this coming summer. We have spent a couple of delightful evenings planning that garden, going through seed catalogues, and making our selection. What used to be an extra burden, the kitchen garden, has become a source of pleasure. Let me name over some of the things we already have on our list:

First come bush beans, the Golden

Wax variety being preferred. We plant a drill of beans about 20 feet long about corn planting time, and we continue to plant every three weeks until quite late in the season. In this way we have beans available for over two months. Crosby's Early Egyptian beets are planted as soon as the land is workable and these too we plant in rotation through the summer as we enjoy the greens and the beets themselves are more acceptable when small than when they get larger, coarser and stringier.

A few feet of drill of Chanteny carrots are also planted in the home garden just to be handy. All other vegetables are handled in the same way so that we will have them from early in the season until late in the fall.

The first greens that we have on the table are asparagus and rhubarb. Our half dozen heads of rhubarb are more than sufficient for all the requirements of the family. The asparagus bed we could not do without. These are perennials and are better to be placed at the edge of the garden, where they will not be disturbed by the plow and cultivator in the spring and fall. Both of them may be manured to almost any extent and will respond in proportion.



Intensive Cultivation as we Find it in British Columbia

British Columbia fruit lands are high in price and their owners must make the most of them. Here we see onions being interplanted to pay interest on the land until the trees come in bearing. Notice the low bedded trees; lower than most Eastern growers would be inclined to favor, but which are over growing in popularity. Photo courtesy U.S. Department of Agriculture.

The plants for cabbage, cauliflower, tomatoes and celery we buy at the grocery store in town as we consider this much less trouble than bothering with boxes in the windows of the house. In tomatoes, particularly it is advisable to have a couple of varieties, an early and a late. The late varieties usually have more meat in them than have the early varieties.

Our garden is always laid out in long rows and all the cultivation is done by horse-power. Likewise it is near the house so that the wife can

go out and get vegetables for dinner any time she pleases.

Now let me give a little preachment. I know that in the average farm home the supplying of the summer table is one of the most constant chores of the housewife. If you want to please her, to bring back the glad light to her eyes, and enter again the happy and true partnership of which you dreamed when a young man, just propose to her that you plan a good garden together. If you intersperse the vegetables with flowers you will have added beauty and added joy.

Methods of Successful Pear Growers

G. C. Mordock, Norfolk Co., Ont.

LAST summer I visited a number of the larger pear growers in New York state in order to learn something about their orchards, methods, and how they were dealing with pear blight. While there are many neglected orchards in the state which are positive eyesores and of no commercial value I also visited orchards where almost the last word had been spoken on the subject of good care. I should like to outline the way in which pears are grown on a couple of these farms.

Mr. L. I. Morrell, of Kinderhook, has some 175 acres in fruit, and has made a special study of pear growing, especially of Keiffers. The varieties he grows are Bartlett, Seckel, Clapps and Keiffer. The soil is a sandy loam and was in very poor condition when he bought it. Since then he has built up the land until at present it is in excellent condition. In one block he has 228 Keiffer trees 10 years old, which are in great shape. In the early spring he sends a man through these Keiffers to prune back all the branches to old wood; that is to say, he removes all last year's growth. This causes the trees to make a very vigorous growth each year, although they are not allowed to get any larger. Fruit spurs are developed all along the main branches of the result. Every year he applies a mulch of tobacco stems around his trees at the rate of 25 pounds to the tree, which costs him \$12 a ton by the car. Besides this he plows in a cover crop every year, which consists of a mixture of rape, clover, and vetch. Added to the tobacco stems, and cover crop he applies a commercial fertil-

izer of 4 per cent. N. and 18-20 per cent. phosphoric acid. Mr. Morrell is absolutely convinced that commercial fertilizers are necessary in order to get the best results. He cultivates about every 10 days from the early spring to the middle of June. Last year he sold all his pears at an average of \$4.25 a barrel, including Keiffers.

The trees are planted 20 feet apart, and he estimates that for the past five years his Keiffers have averaged between three and five barrels. Mr. Morrell has blight in his orchard, but is doing all he can to control it, and feels confident that he will succeed. The application of fertilizers and his system of pruning are the most noticeable features of Mr. Morrell's method of handling his orchard. The amounts used seem heavy, but for 20 years he has been experimenting and is now fully convinced that he cannot do with less.

Mr. B. I. Case grows Seckel, Bartlett, Keiffer, and Duchess, and has had very good success. Although he does not believe in as severe pruning as some growers recommend, he has his orchard gone over every year and a certain amount of pruning done. He cultivates and uses cover crops of clover, and has done so for years. It may be of interest to give his returns for the past few years. Mr. Case has kept strict account of all expenses on his farm and can tell his exact profit on every crop each year. In 1906 he netted \$140 an acre from Bartlett. In 1907, \$141; 1908, \$73; 1909, \$106; 1910, \$44; 1911, \$67; making an average net profit of \$65 an acre a year from this block of Bartletts.

Massey-Harris

Power Spray Outfits

Proper Spraying yields Big Returns.

Unsprayed fruit is liable to be a drug on the market.

A Good Spray Outfit will soon pay for itself and Adds to your Profits.

The Massey-Harris Sprayer

has Double Cylinder Vertical Pump with Bronze Plungers—Tank is made of selected Cypress—The Agitator is operated from top of the Tank—Front Wheels turn under the Frame—Cab protects the Engine—no Sprocket Chains or other "trappy" parts—Engine is Hopper cooled—runs in any weather and on the steepest side-hill.

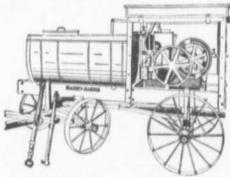
Massey-Harris Co., Limited

Head Offices—Toronto, Canada.

—Branches at—

Montreal, Moncton,
Winnipeg, Regina,
Saskatoon, Swift Current,
Calgary, Yorkton,
Edmonton.

—Agencies Everywhere—



Within a few weeks the value of a few killed or manless, in the v. licensed dog. In the v. licensed to ca. ness of sheep purpose a dog. Between a dog little differer for either food usually kept do no harm, is permitted in- and destr it wills.

Like a lic does are lic what other p only to destr difference bet seller and lic that the dog while the ru life—and wh soul in many

Is it not our modern this man and the dog-business blame the people who the Govern lose the supp did not cand rumsellers' would be ab Government granting throug the people The people

"Your ewes they?" I as herd.

"Yes," h keep them t that breedin fat. My ew till they ar

My friend greatest fal flock. Absc and much is breeding 6 months. Th weak lambs ewes fat, in good con

The ideal gack in my gran, one former to o would avoid corn, barley necessary to it would be the oats a point is to Have them cannot get The sheep will starve ac

Roots are sheep. I h success of l large use Turnips at Manole's r but I woul ing them u



Notes for the Shepherd

Sheep or Dogs?

J. A. Macdonald, Carleton Co., Ont.
 Within a few days some 90 sheep to the value of \$300 have been either killed or mangled so as to be worthless, in the vicinity of Misouche, by licensed dogs. These animals are licensed to carry on their bloody business of sheep killing, as for any other purpose a dog is kept I do not know. Between a dog and a canary there is little difference. Neither is suitable for either food or for labor. One is usually kept in a cage where he can do no harm, while the other (the dog) is permitted to run at large, plundering and destroying where and whence it wills.

Like a licensed rumseller, these dogs are licensed to do business; for what other purposes or use is a dog permitted to destroy life? There is little difference between licensing the rumseller and licensing the dog, except that the dog has the advantage in that he only destroys animal life—the rumseller destroys human life—and what is more, the immortal soul is not in many cases.

Is it not a fearful commentary on our modern 1913 law and justice when man the dog—and the licensed rumseller—do business. I suppose we shouldn't blame the Government. It is the people who are really to blame. If the Government thought they would lose the support of the people if they did not cancel all dog licenses and rumsellers' forthwith, their licenses would be abolished at once. But the Government knows and feels that in granting those licenses they are pleasing the people whom they represent. The people are wholly to blame.

Winter Feeds for the Flock

Andrew Kelly, York Co., Ont.

"Your ewes are a little thin, aren't they?" I asked a neighboring shepherd.

"Yes," he answered readily, "I keep them that way. I don't believe that breeding ewes should be kept fat. My ewes are never fattened until they are ready to go to market."

My friend held as truth one of the greatest fallacies in the care of the flock. Absolutely nothing is gained and much is lost by underfeeding the breeding flock during the winter months. Thin ewes of a surety bring weak lambs. I don't like to see my ewes fat, but I do like to have them in good condition.

The ideal feeds for the breeding flock in my estimation are oats and bran, one and a half parts of the former to one part of the latter. I would avoid fattening foods, such as corn, barley, or rye. If I found it necessary to feed any of these three I would be in small proportions with the oats and bran. An important point is to keep the troughs clean. Have them so made that the sheep cannot get their feet into the feed. The sheep is a dainty animal, and will starve rather than eat dirty grain.

Roots are a food par excellence for sheep. I believe that the wonderful success of the British shepherds is the large use that they make of roots. Turnips are a perfectly safe food. Manure's may be all right for use, but I would go very slowly in feeding them unless after careful experi-

menting I had found them to be all right. Turnips are so much easier grown that I prefer them.

Where one has good alfalfa or clover hay, the grain feed may be continued until one month before lambing. The amount of feed depends on the quality and quantity of the roughage; just enough to keep the ewes in good condition.

Preparing Sheep for Slaughter

By T. G. Paterson

Wherever possible, it is advisable to take the sheep off feed for from twelve to twenty-four hours before slaughtering, with the exception of lambs, which will fret too much if taken from the dams and will consequently be in a feverish condition when slaughtered. As with all stock, however, sheep should be given all the water they want to drink.

Always handle the sheep quietly so that they do not become excited and overheated before killing. Special care should be taken to see that sheep are not handled by the wool. Pulling the fleece by grabbing a sheep on the back or on the side will leave discolored, bruised spots on the carcass. Kicking or pounding the animal has the same effect. Always catch a sheep by the neck, rear flank, or hind leg and hold it by placing one hand in the armpit of the lower jaw and the other at the dock.

Besides causing bruises and discoloration of the carcass, handling by the wool is painful to the sheep. The fleeces of sheep, selected for slaughter, should be dry as it is hard to obtain a clean, untainted carcass if the fleece is wet.

After such careful preparation for slaughter, the animal bleeds more thoroughly, the carcass cools out more rapidly, the entrails are easier to handle, the danger of eutims is lessened, the carcass makes a better appearance, and the flesh has a better color.

Workers or Shirkers?

C. F. Whitley, In Charge of Records, Ottawa

Those dairy farmers who are carefully noting the total production of each of their cows for the season are finding some curious differences. For instance, in one Ontario herd the yield of a 9-year-old grade that freshened March 5th was 4,080 pounds of milk up to the end of July; her stable mate, also 9 years old, that freshened March 12th, receiving the same feed and care, gave only 2,970 pounds of milk. Her half a son of milk in that short period indicates a considerable difference in income between the two cows.

In another herd at the same factory between two six-year-olds that calved April 3rd and 4th, there is a difference of 1,400 pounds of milk and 60 pounds of fat up to the end of July. This means between \$14 and \$15 that one cow earned more than the other, and will starve rather than eat dirty grain. Dairy records alone will provide the means of ascertaining these facts beyond question. Forms for weighing milk either daily, or three days per month, are supplied free by the dairy division, Ottawa. In your letter of application state which you want.

Bruce's Seed Oats

Bruce's Conqueror. A new variety from Northern Europe, very heavy yielder. Straw is strong, of medium height, grain is plump, this silenced, pearly white, and makes splendid oat meal. It is hardy and ripens medium early. Peck 40c, bushel \$1.35 here.

New O.A.C. No. 72. A new variety, of exceptional merit, an immense yielder and of fine appearance. It is a branching, White Oat, early, and the straw is good and strong, the hull is thin and the grain weighs well. Peck 40c, bushel \$1.00 here.

New 2½ bushel cotton bags 80c each extra. Prices of above postpaid, 1 lb. 20c, 5 lbs. 55c, 3 lbs. 80c, 4 lbs. 65c, 5 lbs. \$1.10, 6 lbs. \$1.20.

We can also offer Daubigny, American Banner, Siberian Abundance, Scottish Chief and Green Mountain, also Black Turnip seed and Black Victor.

FREE—Our illustrated 112-page Catalogue of Vegetable, Fruit, and Flower Seeds, Bulbs, Plants, Garden Implements, Pottery Supplies, etc. Write for it.

JOHN A. BRUCE & CO., Limited
 Seed Merchants
 HAMILTON, ONTARIO



FOR SALE AND WANT ADVERTISING

THREE CENTS A WORD, CASH WITH ORDER

HELPFUL LITERATURE for Bible Study, free on application—International Bible Students' Association, 59 Alloway Avenue, Windsor, Kan.

FOR SALE—A quantity of White Cap Yellow Dent Seed Corn Carefully selected. Well cured and guaranteed to grow. Price, \$1.25 per bush—John Walcott, Ruscomb, Ont.

BUTTERMAKER WANTED—First-class buttermaker, with certificate. Quote price when applying—Box 245, Toronto.

We have only a limited supply of those **Al Quality Henry Boker Razors**. They are being offered for One New Subscription to **FARM AND DAIRY, Peterboro**

CLEAN STABLES PAY BEST

Your dairy profits largely depend upon your dairy barn. In a clean barn like this, where the CLEAN, galvanized steel stalls prevent disease by affording no harboring places for germs, and where the bright sunlight can food every corner, cows cannot help but do well. They are healthier, and give more and better milk. You get better prices for your stock and for your dairy products—you have fewer veterinary bills to pay. That's how BT Steel Stalls increase dairy profits.

This photo shows the BT Galvanized Steel Stalls as they are being supplied for thousands of dairy barns in every part of Canada. A stable like this is strong, and there's nothing to break or rot. It lasts a century without repair.

BT GALVANIZED STABLE EQUIPMENT

Write to-day for free Stall Book No. 21 that tells all the facts about BT Galvanized Steel Cow Stalls and other stable equipment. Read how, by a special process, we force the galvanizing material right into the pores of the steel, so it's not affected by stable moisture or acids, and the stalls always look well.

Also ask for free book, "How to Build a Dairy Barn," that shows how to build your barn from start to finish, how to frame it at half the cost of usual methods. Send coupon to-day.

FREE Barn Plan Service
 Avoid all the costly mistakes sure to be made when you use poorly and carelessly made barn plans, by getting **BT PLAN YOUR BARN** FREE with our mail coupon, and we will make you an up-to-date plan for building or remodeling, without charge, showing handiest layout, best widths for stalls, mangers, passages, cattle-stands, and all positions for windows, posts, etc. Send coupon to-day.

BARN PLAN COUPON

BEATTY BROS., Ltd.
 1303 Hill St., Ferris, Ont.

BEATTY BROS., Limited
 1383 Hill St., Ferris, Ont.

Send me your Stall Book No. 21, Free, also book, "How to Build a Dairy Barn." Make me a plan for Building or remodeling according to following instructions. I will keep it some. Inside dimensions of my barn will be _____ I expect to build or remodel, in 1914, about _____

Name _____ P.O. _____ Prov. _____

"INTERNATIONAL POULTRY FOOD"

C. W. MONSON, one of the best known poultrymen in Indiana, says—"I heartily recommend **INTERNATIONAL POULTRY FOOD**, as I have tested it on my hens. They laid eggs all winter. No one around here did as well with their poultry, and my results were caused by **INTERNATIONAL POULTRY FOOD**."

GEORGE PETERS writes: Highland Grove, Ont., March 25—"International Stock Food Co., Limited: Dear Sirs—I must say your Poultry Food is all that you claim. I never had my hens lay all winter before this and they have laid steadily."

INTERNATIONAL POULTRY FOOD is the "best poultry tonic in the world," as an authority writes. It makes hens lay all the winter, because it keeps fowls strong and healthy.

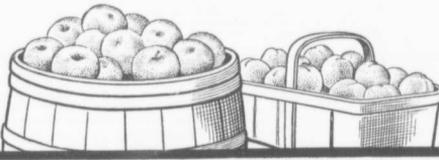
It is a wonderful egg producer—prevents chicken cholera—cures roup—and is a prime fattener.

Eggs are easy up. Now is the time to make money out of your hens. Feed **INTERNATIONAL POULTRY FOOD** and double your egg production.

For Sale by Dealers Everywhere. Write for it. We'll send you a free copy of our \$3.00 Stock and Poultry Book. Write for it.

International Stock Food Co. Limited, TORONTO.





Progressive Jones Says:
"Get More Barrels And More Baskets"

I tell you, friend, that you can make your trees yield you more barrels and baskets of luscious fruit by enriching the soil with the profit-making

Harab Fertilizers

I know fruit growers who are many dollars richer from using Harab Fertilizers last year. I know of some who won prizes for their fruit—one being a prize winner at International Apple Growers' Association at Chicago. These prize winners attribute their success to Harab Fertilizers.

Now, friend, if Harab Fertilizers have done so well for other fruit growers, vegetable growers and farmers, isn't it reasonable to expect they will do as well for you? Isn't it worth while trying them for at least half your orchard? Then make a careful count and see how many more barrels and baskets of big, sound fruit you get from the fertilized trees than you do from the unfertilized. If the results don't warrant you using Harab Fertilizers on your whole orchard next year, well, I'll be surprised, very surprised. But I'll bet the surprise will be on the other foot, when you see how many more dollars a small investment in Harab Fertilizers will bring you.

There's an interesting booklet, describing the 14 different Harab Fertilizers—each for a particular purpose. The Harris Abattoir Co. promise me they will send my friends copies without charge. Just write them for a copy to-day.

Shows for more fruit profits
Progressive Jones

The Harris Abattoir Co., Ltd., Toronto



Results from Soluble Sulphur
R. B. Scripture, Northumberland Co., Ont.

I have about 55 acres of orchard, practically all apples. Last year I decided to use Soluble Sulphur and purchased twenty 100 pound drums, which by the way is the handiest package to handle spray material in, especially in comparison with 600-pound barrels. For the dormant spray I used 10 pounds of Soluble Sulphur to 40 gallons water, and for the two later sprays two pounds to 40 gallons water, using the usual quantity of Arsenate of Lead.

I have used Bordeaux and Lime-Sulphur for a number of years, but never with the splendid results that I had last year. My fruit was exceptionally free from worms and scab, and was well colored. But to my mind the most important of all, my crop was free from Aphid. I cannot say that Soluble Sulphur controlled this pest, but I can say that while my fruit was free from Aphid, that of some of my neighbors who sprayed with Lime-Sulphur had their fruit infested with Aphid.

I have never used any spray material that can be handled or prepared so conveniently, quickly and cheaply as Soluble Sulphur. My orchards are spread over quite a large amount of ground and other sprays it has been necessary in using Lime-Sulphur to use an extra wagon for moving the solution to the different water supply. Last year, in the morning, I would weigh up enough for several tanks in paper sacks and put on the spray wagon and carry to the water supply, thus saving much time and considerable material.

Soluble Sulphur goes into solution very readily and contains nothing to clog the nozzles. The results were very satisfactory to me—no burned foliage, clean fruit and the most inexpensive in original cost and handling and saving in time in its preparation and use.

Enemies of the Strawberry
W. A. Dier, Carleton Co., Ont.

One of the enemies to which the strawberry is subject is the white grub. It is the larva of the May beetle. The grub when fully grown is about an inch and a half long and three-eighths of an inch thick, nearly white with a brown head. They are usually more scarce in old pastures and meadows than elsewhere, because their principal food is the roots of different kinds of grass. The old sods offer protection against birds which devour them. Therefore it is not safe to plant strawberries in newly plowed sod. It is better to occupy the ground with some crop which requires considerable hoeing and cultivation for at least two years before planting to strawberries. This gives the birds a chance to clear the ground of this pest.

Birds themselves are exceedingly troublesome to the small grower during the fruiting season, and they seem to be decidedly partial to the finest specimen. On the first sign of ripening, I place pieces of newspaper under the clusters to protect them from the bugs in the ground and inverted strawberry boxes on top to protect them from the birds. In this way only could I save my best berries. It means work, but one always feels well repaid for the extra labor which this protection involves.

The small grower can usually supply water during dry weather, and possible to apply it. A good soaking twice a week in the evening is far better than a sprinkling every day.

TESTED
KEITH'S MANGEL
 TURNIP and FIELD CARROTS
SEEDS

Did you ever figure out what it cost you in returns you do not get when Root Seed germinates poorly and leaves big empty spaces.

Why not get Keith's tested seeds for 1914 and be absolutely certain of live seeds and a perfect stand.

It is worth your while to sit down and order good live fresh seeds direct. Do not put off till seeding time, when you will have to go to the nearest store to get doubtful seed.

Our Mangels and Turnips are put up in 1 lb. cotton bags. There is nothing better to be got.

If you are ordering Clover and Timothy Seed, Seed Grain or Seed Corn your Mangels and Turnip Seeds can go along with them at 50 per lb. less than prices herewith quoted:

MANGELS—Keith's Prize-taker, Danish Sluistrup (a new intermediate variety fine). Price for both, postpaid, 1b. 30c-5 lbs. or over at 30c.

MANGELS—Keith's Yellow Leviantan, Yellow Intermediate, Mammoth Long Root, Giant Half Sugar. Prices, Postpaid, 1b. 30c-5 lbs. or over at 25c.

SWEDEN TURNIPS—New Century, Scottish Champion, Elephant. Price, Postpaid, 1b. 30c-5 lbs. or over at 25c per lb. Keith's Prize-taker Price, Postpaid, 30c-5 lbs. or over at 30c.

MAMMOTH SMOOTH WHITE INTERMEDIATE CARROT—Price, per lb. 60c Postpaid.

GEO. KEITH & SONS
 Seed Merchants since 1856
 124 King St. East - TORONTO

FORTY YEARS REPUTATION

is something that is of incalculable value.

It is plain that we have to be just as careful of the quality of our goods now, to keep up that reputation, as we have been in building it.

And that is your surest guarantee of the uniform excellence of—

GUNNS SHUR CROP FERTILIZER

We have an interesting book about fertilizers—it is yours for the asking.

Gunns Limited, West Toronto

HAWK BICYCLES

An up-to-date High Grade Bicycle fitted with *Avirex* tires, *New Dapmore* Counter Steaks and *Hubs*, *Examined* Wood Rims, *Dalchabak* Tires, High grade equipment, including *Mudguards*, *Pumps* and *Tools*.

Send **FREE 1914 Catalogue**, 90 pages of *Bicycles*, *Sundries* and *Repair Material*. You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON, 27 N. DUNDAS ST. WEST, MONTREAL.




Selecting

G. W. Kind
 I know Kind of well bred always do be desired breeds run sible I always breed from hens with long full feet. It is general male bird is essential to one that has apart, quick bright red cheeks, glossy hens mated should make ensure fertility too fat.

Good

During the turkey season twice a day



It is a fact our male ground the horns, around the neck and they are by pro-

should be a healthy count over it is small amount to encourage roosting of them from or flocks.

The follow for the full weight of wheat ears this green once a day, cels, ebbing best. Grilled at all.

Common

Bert Sn
 A disease is depicted different color improving count and dropping droppings streaked y To erad flock mix bone to a three or whether remedy is



Selecting the Breeding Pen
G. W. Kindred, Middlesex Co., Ont.

I know from experience that a flock of well bred birds of one variety will always do better than a flock of mixed breeds running together. If possible I always select my best layers to breed from. These generally are hens with long necks, deep bodies and full buff.

It is generally conceded that the male bird is half the pen, hence it is essential to pick out a strong bird—one that has good stout legs, well set apart, quick action, good crown, bright red comb and wattles and sleek, glossy plumage. Eight or 10 hens mated to such a cock bird should make fertility a surety. To ensure fertility birds should not be too fat.

Good Ration for Turkeys

By C. E. Brown

During the winter season the stock turkeys should be fed and watered twice a day. Only sufficient food



The Orchard is the Ideal Range for Growing Chickens

It is a fact well proven in the experience of all good poultry raisers that chickens make the most healthy and vigorous growth when ranging on cultivated ground. The cultivated orchard, therefore, is the ideal range. The brown Leghorns, seen in the illustration herewith, belong to Mr. Tillingham, Vernon, Conn., and they show their appreciation of the ideal conditions under which they live by proving themselves one of the most productive flocks in that State.

should be given to keep them in good healthy condition. When winter is over it is advisable to feed them a small amount of grain each evening to encourage them to return to their roosting quarters and thus prevent them from wandering away with other flocks.

The following ration is a good one for the turkeys: Mix equal parts by weight of corn or barley, oats and wheat screenings, and in addition to this green food should be supplied once a day. For this purpose mangels, eschargo, or clover leaves are the best. Grit and water should be supplied at all times.

Common Diseases of Chickens

Bert Smith, Lambton Co., Ont.

A disease common in poultry flocks is dysentery. This disease is due to different causes, the most common being improper feeding. Another frequent cause is chilling or overheat, especially in young chicks. The droppings are watery and sometimes streaked with blood.

To eradicate this disease from the flock mix a tablespoonful of raw bone to a pint of soft food and feed three times a week to all the chicks, whether affected or not. Another remedy is to boil two ounces of ginger

and one of copperas in a gallon of water and moisten the food with this liquid. Boiled rice is also good feed. Avoid feeding corn.

When treating limber-neck in chicks, caused by eating putrid animal matter, either the decayed flesh or maggots, a good remedy is to put a tablespoonful of borax in a pint of water and feed three times a day, or give a pill of asafoetida the size of a split pea, night and morning.

When affected with this disease the fowl cannot hold their heads upright and stagger, twisting them around.

When fowl are suffering from apoplexy they have a peculiar motion of the head and frequently fall from the perch. This disease is caused by a ruptured blood vessel due to too heavy feeding or violent exertion. It is generally useless to seek to effect a cure for this disease, but if noticed in time it may be checked by applying ice to the head and giving two teaspoonfuls of castor oil.

If the poultryman has a fair conception of the symptoms, causes and treatment of various diseases that may affect his flock it may be the means of saving dollars for him.

Green as a Gosling

"Hm! I paid a quarter apiece for the eggs. They made full-grown geese by Thanksgiving, but they didn't lay the next spring nor the

130-Egg Incubator and Brooder ^{each} \$13.90

Freight and Duty Paid

If ordered together we send both machines for only \$13.90 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nixers under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Five year guarantee—30 days trial. Incubators finished in natural colors showing the high grade California finish. Double size—no matter what size you want. Over machines with others, we feel sure of your order. Don't buy until you do this—you'll save money! We'll pay to investigate before you buy. Remember our price of \$13.90 for both Incubator and Brooder and covers freight and duty charges. Send for FREE catalog today, or send in your order and save time. Write to—**WISCONSIN INCUBATOR CO., Box 318, Racine, Wis., U. S. A.**

A Little Meat — A LOT OF EGGS

Every modern poultry raiser knows that a good egg yield cannot be obtained without food. Animal food, Good Meat and Bone, fed in proper proportions, is the most profitable investment you can make in winter feeding. But it is also the most expensive part of the rations. When it comes to concentrated Poultry foods, Black Victor—fresh, healthy meat and clean bone, with all the waste and moisture removed—will prove the most economical and profitable. Black Victor Meat Scrap at your dealers, or sent, all carriage charges prepaid, for \$4.00 per cwt. Write for complete price-list before the hot egg season is past. **Matthews-Blackwell Limited Toronto**

Black Victor Meat Foods

BARGAINS — A few Cockerles, Barred Rocks, Brown Leghorns, Houdans and Black Minorcas. Either utility or prize-winning stock. Also Eggs for hatching. —Sunnyside Poultry Yards, Highgate, Ont.

EGGS, BUTTER and POULTRY

For best results, ship your Live Poultry to us also your Dressed Poultry, Fresh Dairy Butter and New Laid Eggs. Egg cases and poultry crates supplied. Prompt Returns.

The Wm. DAVES Co. Ltd.
Established 1854 **TORONTO, ONT.**

BABY CHICKS

Order your baby chicks now from our splendid laying strain of SINGLE COMB WHITE LEGHORNS

UTILITY POULTRY FARM
T. G. DELAMERE, Prop.
STRATFORD - ONT.

SEED BARLEY
O. A. C. No. 72

Choice Sample. Pure and Clean. Yield this season 22 bush. per acre. 50c. per bush. in small lots; 75c. bush and over 55c.

H. R. NIXON & SON
St. George, R.R. No. 1 - Ontario

SEED BARLEY, O.A.C. No. 21

A very choice stock of this great barley, second generation from the hand-selected seed plot. Took 2nd prize at English Winter Fair, 1913, in registered seed class. Pure and clean, \$1 per bush.

Siberian Oats, a bright heavy sample. Best in Field Crop Competition. The best oat for this Province. 65c per bush, best included.

We take the greatest care to keep our stocks pure and clean, and have never offered such a high-class lot as we have for sale this year.

Empire State Potatoes our speciality, also a limited quantity of selected Delaware and Rural New York.

Alfred Hutchison - Mount Forest, Ont.

PURE SEED

O. A. C. No. 72 OATS

They are No. 1. In every respect, samples taken by Government Seed Inspector, testing slightly above the highest grade demanded by the Seed Control Act. Yielded on experimental plots last season 47.5 bush. to the acre. For sale by the grower.

R. F. FLINCK, VICTORIA SQUARE, YORK CO., ONT.

HOW TO HATCH CHICKS THAT LIVE

Prairie State Incubators Universal Hovers & Poultry Supplies

Send for this FREE Book

And learn how you can benefit by the experiences of successful poultry raisers, and thus avoid making costly mistakes.

The book tells all about the kind of Incubators and Hovers that have been endorsed by all our Canadian Agricultural Colleges and expert poultrymen everywhere as the most efficient and economical.

It shows how to build your own brooders, and the kind of feed that insures rapid, healthy growth of chicks. We'll send you a copy of the book free.

We offer the best cash market in Canada for eggs and poultry. Ask for quotations.

Gunn, Langlois & Co., Limited
60 St. Vincent Street, Montreal

Prove the "BISSELL" by Its Work

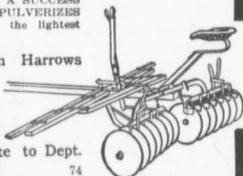
Do the gangs on your Harrow crowd together and raise out of the ground if it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together no matter how hard the ground may be.

Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

We ask you to take a "Bissell" out into the field and test it beside other Harrows. Then you

will HAVE PROOF that it is a SUCCESS ON HARD LAND—THAT IT PULVERIZES THE BEST—and that it is the lightest draught.

Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept. R for free Catalogue.



T. E. Bissell Company, Limited, Elora, Ont.



"BEAVER" SULKY

This BEAVER Sulky Plow can be fitted with wide or narrow bottoms, so is adapted to all classes of work. The triangular wheel arrangement makes it very easy riding over the roughest ground. The rod connection between furrow and rear wheel axles enables it to follow closely every irregularity of the surface, and makes for continuous, uniform furrows. Furnished with rolling or knife colter or jointer; choice of several bottoms.

For 37 Years

the name **COCKSHUTT** has been Canada's household word for the *very best* plows. From Newfoundland to Vancouver, these famous plows have been the forerunners of bigger and better crops.

In every type, from light walking plow to 12-furrow engine gang—in every soil, from lightest sand to heaviest clay—

COCKSHUTT PLOWS



"ONTARIO" FOOT-LIFT

This ONTARIO Foot-lift Sulky is the most practical Sulky-Plow built. Raising and lowering of the plow is controlled by foot. A powerful helper-spring makes the operation remarkably easy. A never-failing lock positively holds the plow down to its work or clear of the ground, as desired. So simple and easily controlled is this plow that any boy can handle it. Rolling or knife colter or jointer, as desired. Several different bottoms, to meet the needs of your soil.

have proven their ability to turn the deepest furrow in the shortest time with the least effort of operator and horses.

From steel bar to finished implement, **COCKSHUTT PLOWS** are made entirely in the Cockshutt Plant. That's why we can guarantee them to give you absolute satisfaction in every respect.

Cockshutt Plow Company Ltd.
BRANTFORD ONTARIO

Sold in Eastern Ontario, Quebec and Maritime Provinces by

The Frost & Wood Company Ltd.
SMITH'S FALLS, Ont. MONTREAL, Que. ST. JOHN, N.B.

See these plows at your nearest dealer, or drop us a card for our complete Plow Book

A. B. C. of Winter Feeding
H. Y. Glendinning, Ontario Co., Ont.

Fat is, commercially, the most important constituent of milk. The feeder, however, takes but little stock in a food of high fat content for milk production. Let us suppose we have two sister cows standing side by side, both receiving the same feed and both giving 30 lbs. of milk daily of the same fat test. If we were to separate the cream from the milk of No. 1 and feed that cream to No. 2, what would be the result? The man who knows little about cow and butter that No. 2 would give twice as much butter fat the next day as would No. 1. But such is not the case. The amount of butter fat from each cow next day would vary but little.

What we look for in a good milk producing food is one that contains a high percentage of protein. One hundred pounds of average milk will contain 3.9 lbs. of protein. This protein is valuable to the cheesemakers and the most valuable element to the feeder. It is their high protein content, along with palatability and succulence, that make bluegrass and white clover such valuable pasture grasses and make June conditions ideal. We winter dairymen must get near these June conditions when the wintry winds are blowing outside.

We can grow the most desirable food on our own farms. Corn ensilage, mangels and sugar beets are cheap, bulky and succulent. Corn ensilage, however, lacks in protein, the most important element. The clovers, oats, peas and vetches will supply this lack. The best supplement to corn ensilage, in my opinion and experience, is alfalfa hay. Where alfalfa can be successfully grown it will supply protein at minimum cost.

I Love My Herd of Holsteins'
(To be Sung to the Tune "The Old Cow Died On")

I own the best cow in this town,
And she is not for sale;
I milk her three times every day
And she always fills the pail.

She gave me four hundred pounds
last week
Of milk that's good and fat;
She's a pure-bred Holstein-Friesian;
(You are not surprised at that?)

But when I say she's two years old,
And twenty-seven days,
You surely will agree with me
That the "Holstein-Friesian" pays.

I own a little Holstein calf,
He's six weeks old to-day;
He weighs two hundred and fifty
pounds
And eats his oats and hay.

I love my herd of Holsteins,
Of them I know no harm;
They pay the best of anything
I have upon the farm.

And then they are so pretty
In coats of Black and White;
And when they eat my hay and corn
They always make it right.

I would not slur another cow,
I don't believe in that;
I simply like the Holstein best
For milk and butter-fat.

And when I wish to sell some veal,
In either East or West,
I notice that the Holstein veal
Is always quoted BEST.

*Mr. C. E. Gies, of Waterloo, Ont., recently made a very creditable record with a two-year-old pure-bred Holstein steer. A few days after the results were announced a postcard reached him from a friend, Mr. Reynolds, the station agent at St. Jacob's, Ont., which eulogized the performance of Mr. Gies' Holstein in the above poetical manner.

Points to Watch When Ordering Nursery Stock

Prof. J. W. Crow, O.A.C., Guelph, Ont.

I FIND that a great many planters value a tree according to its size. In my opinion this is an error.

Expert peach growers always refuse the largest trees, choosing rather one of medium height, or slightly above, and moderately stocky. In apples, I think, the same rule would hold good.

In a well grown block of stock, the large trees are not necessarily the best, and the statement is even more true in plums and cherries than in apples. It is much to be desired that our planters shall become acquainted with the advantages of younger trees. This is most important in the case of cherries and plums, as stone fruits are more difficult to transplant successfully, and younger trees can be more safely moved than those of two years of age or older. In ordering one-year trees, one should specify trees not less than three and a half feet in height and at least moderately stocky for the size. I observe, too, that very many planters are unable to tell the age of a nursery tree. This is not usually a difficult matter, however, as the annual growths are for the most part plainly indicated on the tree itself and are readily observed.

One of the chief advantages in the use of younger trees is the fact that a tree procured from the nursery as an unbranched whip can be headed at any desired height by the fruit grower and can be shaped by him so as to make a tree of better form than the ordinary two-year-old tree as received from the nurseries. The advantages of low-heading are many, and are for the most part obvious. The disadvantages are not nearly so great as one would expect, for the reason that a low-headed tree tends to grow more upright, and cultivation is not interfered with nearly so much as one would expect.

Weeds and grass do not grow under low-headed trees to the same extent as under high-headed trees, and shade furnished by the tree itself also reduces somewhat the necessity for cultivation under the tree. With trees headed to fifteen inches or less, there is very little necessity for cultivating within two or three feet of the trunk. Anything required in that area can be done by hand at small expense. It is obvious that a tree with a 15-inch trunk is much more convenient to spray, prune, pick, and thin than one with a longer trunk.

In selecting nursery stock, one should have these points in mind and should endeavor to buy low-headed trees or buy trees which can be head-

ed low if desired. Transportation charges on the younger trees are less, and in moderate quantities at least they could be forwarded by express with much less danger of delay and consequent injury.

In purchasing trees, it is always wise to see the stock beforehand, if at all possible. In case one can deal through an agent whose reliability is unquestioned, it would be satisfactory to order through him, but if not, the best plan would be for a number of growers in a district to club together and send one man to purchase stock for the entire number.

Sad Mulch or Cultivation

E. S. Archibald, Wolfville, N.S.

My experience with a part of my orchard for six or seven years in sod is that it gave returns both in quantity and quality equal to any other parts of the orchard of same variety of trees (Gravensteins). I applied the same kinds and quantities of fertilizers as to the part of the orchard that was cultivated, and whatever grew on the ground I mowed and left as a mulch. I am strongly inclined to put one-half of the older orchard under this treatment from now on and test it as against that of annual cultivation and cover crop.

My feeling is that with heavy clay land not well drained it would not be good, but with dry, gravelly or sandy land it might be better than our present method. The mowing of grass or weeds and application of fertilizer will keep a mulch that seems to suit the trees all right. I am not writing as an authority on this matter, but have noted for many years trees that have no cultivation (in orchards not my own) and found them doing as well and sometimes better than where cultivation was thorough. Of course, fertilizers of some kinds were annually applied.

I would not dare recommend sod culture as a general practice throughout the Annapolis Valley, for many farmers would rake up the grass mown and haul it to the barn for winter feed without putting anything back for mulch. I notice an up-to-date neighbor orchardist is treating his old orchard by alternate plowing and clover. That is, one side of the trees growing clover and the other side cultivated and clover sown for the next year's growth. It means half the orchard cultivated one year and the other half the next. This will enrich the ground, but is probably hard on the feeding roots to be cut off the second year.

The Brantford Ideal Power Sprayer

CANNOT BE EXCELLED

Phosphor Bronze Bearings Used Throughout

If interested send for special printed matter and revised Spray Calendar



We also manufacture complete lines of Gas and Gasoline Engines, Windmills, Tanks, Grain Grinders, Steel Saw Frames, Water Boxes, Pumps, etc., and have catalogues describing our different lines.

Goold, Shapley & Muir Company, Ltd.
BRANTFORD, ONT.

PEERLESS PERFECTION

Fencing for All Purposes

There is scarcely a fence requirement that we cannot fill directly from our stock, no matter whether it be farm, poultry or ornamental fencing. We carry the largest stock of fencing and gates carried by any one company in the Dominion.

Every Rod Fully Guaranteed

PEERLESS Fencing is well known for its non-rusting qualities. Many of our customers have testified to this fact. Examine any piece of PEERLESS Fence in your neighborhood. Compare it with fences of any other make. You will find little or no rust on the PEERLESS. The longer you can protect a fence from rust just that much longer will it continue to stand up and do business. Send for our literature and find out about this grade fence. Probably your dealer handles it. Dealers wanted in unassigned territory.

Banwell Hoyle Wire Fence Co.

Limited
WINNIPEG, MANITOBA
HAMILTON, ONT.



Don't Pay Freight on Water

Use NIAGARA BRAND SOLUBLE SULPHUR

The most talked of SPRAY in America

The SPRAY in powder form with all the following advantages: No leakage or loss—only one-sixth the freight—Keeps indefinitely. Does not freeze—sticks like paint—100-lb. can makes more spray than 600-lb. barrel. Packed in tight cans of 100-lb., 50-lb., 25-lb., 10-lb. and smaller. Dissolves immediately in water. Does all the work of Lime-Sulphur Solution and does it quicker and better. A perfect insecticide for mealy. A perfect fungicide for apple scab and fungous disease. Cheaper and more efficient than any other spray. Soluble Sulphur has been used for thousands of fruit growers in the United States and by Experimental Stations in Ontario and all over America.

SOLUBLE SULPHUR is a patented product. It can only be procured from us. Hundreds of growers were disappointed last season at not being able to secure it. Our supply is limited—Order at once so as to be sure of being supplied. Write for further particulars if you have never used this spray.

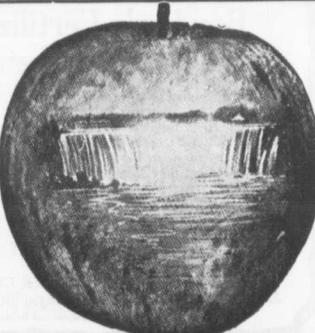
LIME SULPHUR—We will still supply the famous Niagara Brand.

ARSENATE OF LEAD—The highest grade only—The kind that gives results.

SPRAY PUMP—Brain and Niagara—Hand and Power—Noted for power—capacity—high pressure—low cost of maintenance—efficiency—Send for catalogues.

Let us quote you on your requirements in spraying supplies

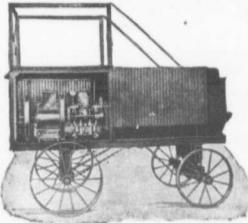
NIAGARA BRAND SPRAY COMPANY, LIMITED
BURLINGTON - - - ONTARIO



AT LAST

Just The Outfit You Are Looking For

The most practical, efficient and simple high pressure Power Spraying Outfit ever offered.



"GOES LIKE SIXTY"

Light Weight High Pressure Direct Geared No Racking Pump Jack

100% SERVICE

Engine can be used for other work all the year round. Truck makes a capital farm wagon. Sills of channel steel, with steel platform.

Price of Complete Outfit, Only \$230.00

This includes all Accessories, Engine, Pump, Tank, Truck, Bamboo Extensions, Agitator, Hose, Nozzles, Etc.

Do not buy a Sprayer until you have investigated the "Goes Like Sixty" Power Sprayer. Send for Sprayer Catalogue today.

GILSON MFG. CO.

422 YORK STREET - GUELPH, ONT.

502.6 Bushels Potatoes

From One Acre of Ground

TWENTY DIFFERENT FARMERS in 20 different parts of New England competed the past year in growing potatoes. The crops were widely separated as to climatic and weather conditions. Each one planted, cultivated and took care of his crop in his own way; but all used

Bowker's Fertilizers

And No Other Dressing

The winning crop was 502.6 bushels. The average of the twenty crops was 322.8 bushels. The average yield in New England is 131.6 bushels, and for the United States 89 bushels. Our crop-growing contests of the past four years have been so fairly and accurately conducted that they have been accepted everywhere as authentic. Henry Wallace, Editor of Wallace's Farmer, writes: "There is no guesswork about them."

Send for our Book of the Contest. Also tell us what your crops are, and your fertilizer requirements and we will send you our helpful book on Plant Food and our new Illustrated Catalogue.

BOWKER FERTILIZER COMPANY

Also New York, Buffalo, Philadelphia and Baltimore

Forcing Rhubarb

John Gull, Peel Co., Ont.

A simple means of forcing rhubarb that is specially advantageous after the crops indoors are more or less exhausted is that of raising supplies outdoors by artificial means. This may be done as soon as the worst of the winter is over, and is a practice that should be extremely popular, anyone with a small amount of trouble may achieve results that are very satisfactory. For successional crops, outdoor forcing is much to be preferred. The plants should be forced where they are growing, and if a warm border is available, so much the better.

All that need be done in forcing a crop outdoors is to cover the crowns of the plants with barrels, tubs, boxes, or any such article which shall have a movable lid. Large barrels should be sawn in two. The top end of the barrel should be knocked out, and made to suit the purpose of a movable lid, this being removed for observation and airing, also for obtaining supplies when ready. These utensils should be embedded in stable manure and leaves, this material providing the necessary warmth to excite the crowns into growth. When leaves and stable litter are mixed in the proportion of about two of the former to one of the latter, a gentle heat may be provided.

Summer Pruning

When asked recently for his opinion concerning the summer pruning of fruit trees, Prof. C. L. Lewis, of the Oregon Agricultural College, replied as follows: "I believe with trees three to ten years old summer pruning, if properly done, will have a very good influence in keeping up certain characteristics and tend to bring the trees into bearing earlier. Certain trees, like the Northern Spy, have been materially benefited.

I have seen indications also of summer pruning being a hindrance. In some cases the work has been overdone and I feel that the trees have been damaged. The tendency in mature and bearing trees is to over do. I have seen men cut off branches six inches in diameter. I have watched a number of orchards, two or three years old, and I fail to see any benefit from such work, in fact the effect, if anything, was injurious to the trees.

"Of course summer pruning can be done in two ways. One is to help shape the tree, correct the habit of growth, and perhaps some can be gained in that way; and this type can be done any time you desire. I believe, however, it should be done moderately and that one should work with the idea of avoiding undesirable growth and development by early pinching and moderate cutting. I believe in doing considerable work of this kind with trees from three years up, and perhaps two-year-old trees.

"The second type of summer pruning is to induce fruitfulness. You can increase the accumulation of tissues around the buds and around the branches by summer pruning, but whether this will result in more fruitfulness and stronger growth, is an open question. Probably it would, like everything else, be influenced by the general treatment of the soil, the drainage it is getting, any artificial stimulation it is receiving, and similar factors. This second pruning for fruit has to be done when the trees are just in the right condition of activity. If the trees are growing too strongly the results are not secured."



SELDOM SEE

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.

will clean it off without laying the horse up. No blister, no hair gone. Concentrated—only a hair

pins required at an application. \$2 per bottle delivered. Describe your case for special instructions and Book 9 K free. ABSORBINE, JR., sensitive salve for animal. Restores Pained Joints, Enlarged Glands, Gout, Wens, Bruises, Various Venis, Varicosis, Old Sores, Allay Pain. Price 21 and 21 1/2 a bottle at drugists or direct. Manufactured only by W. F. YOUNG, P.O. B. 123 Lyman Bldg., Montreal, Can.

GOOD JOBS

YOU can become a competent chauffeur in a very short time by taking our thorough and complete Auto Course. Our instructors are specialists in their line and our equipment is most complete. Illustrated booklet will be sent free on request. Y.M.C.A. AUTO SCHOOL 35 Broadview Ave. Toronto, Ont.



Club Together

On Your Seed Grain

We can supply you with any quantity—all kinds of seed grain and clovers—SEED CORN and CLOVER SEED our SPECIALTIES. You'll be wise to buy before the spring rush. No order too small for our prompt and careful attention.

SPECIAL RATES TO FARMERS' Write us for prices M. W. SHAW & COMPANY MERLIN ONT

Peck, Kerr & McElderry

Barristers, Solicitors, etc. 415 Water St., Peterborough E.A. Peck F.D. Kerr V.J. McElderry

Seed Corn For Sale

High germination test. White Cap. Yellow Dent. Grown on our own farm. Write TISDELL BROS. TILBURY, ONT. ESSEX CO.

Buy Your Seeds From a House of PRESTIGE

There's a big difference between established, reliable seedmen and those bought from a house of no particular prestige. Buy to grow! Use our tested seeds. Write for our handsome Illustrated Catalogue. A post card brings it by return mail.

Valuable Premium Free When you first order we send you, absolutely free, an attractive picture of the house you see in our catalogue.

Darch & Hunter Seed Co.
Box 1297 Ltd.
London, Ont. Canada

Growing M. B. Davis OOD as in grow potatoe season should from your good clear est and most harvest plants in the give you procured from it pays to p of those potato In case, been able to know to be scab, it is a measure from a disease in potato plant seed potato but which h scabby one. The disease remaining carried to bearing the It is not disinfected, and possible, and if the o planted on be com seed, immer lorida (corr or more ho mercuric bit of water. is to use f sublimate, o two gallons of the seed rotation of manently to In cutting one or two of tuber fo Ca THE P THERE is vital. stood will grow in but not to a good soil, t able. In t ing of a cla some sand clay, or if get a load in any case it some well Digs the so fork or spe as three in sible, becom of the soil not. It also in the nee In the ev to procure nitrate of feet of soil east, rakin the plants, about two to give the air and en cultivating the cabbage. It is very cultivate, o The great - - - which inva different it are three it cut-worm, the reason attack the and both gnaws the second

Growing Potatoes for Profitable Results

M. B. Davis, B.S.A., Manager Sunnyside Farm, Ltd., Annapolis Co., N.S.

GOOD seed is the first essential in growing a profitable crop of potatoes. The seed for next season should be carefully selected from your own field if you have a good clean crop. Select the smoothest and most uniform tubers from the heaviest yielding and healthiest plants in the field. These tubers will give you larger yields than those procured from the store at random. It pays to pay attention to this part of the potato business.

In case, however, you have not been able to obtain seed which you know to be free from the potato scab, it is advisable to use preventive measures from the start. The scab is a disease infecting the tubers of the potato plant, and a single scabby seed potato or even one which is clean but which has been in contact with a scabby one, may ruin a whole crop. The disease may perpetuate itself by remaining in the soil or it may be carried to new ground on a potato bearing the spores of the disease.

It is not practical to sterilize or disinfect the soil, but it is practical and possible to do so with the tuber, and if the clean or disinfected seed is planted on new ground the disease may be controlled. To disinfect the seed, immerse them in mercuric bichloride (corrosive sublimate) for two or more hours, using one ounce of mercuric bichloride to eight gallons of water. Another effective method is to use formalin instead of the sublimate, one ounce of formalin to two gallons of water. This treatment of the seed, together with a judicious rotation of crops, is sufficient permanently to control this disease.

In cutting the seed, cut them to one or two eyes, leaving a large piece of tuber for the young sprouts to

gain nourishment from until they are able to obtain some from the soil. If cut some time before planting, sprinkle a quantity of airslaked lime over them.

Land which has been heavily manured the previous year is preferable for the potato crop. Commercial fertilizers have given excellent returns with the potato, but whether or not they can be used to advantage without the addition of some manure, depends on the texture and on the amount of humus contained in the soil. If your land has been previously well manured, so that it is light and friable, fertilizers alone will be best to use. The following is a good formula for potatoes: 250 pounds of nitrate of soda, 350 pounds acid phosphate and 200 pounds of muriate of potash an acre.

The soil should be well prepared. Have the land in thorough shape before planting. By constant disking and harrowing you pulverize the soil, thus increasing the amount of surface at the disposal of the roots. This means more food for them and hence a large crop.

In planting, the furrows are best opened with a double mouldboard plow and the seed dropped about 14 inches apart in the furrow. They may be covered with the same implement to a depth of four or five inches, levelling off afterwards with a smoothing harrow. If the ground should harden before the sprouts show, run a weeder over it to break the crust.

As soon as the plants are a few inches high start cultivation, cultivating deep and wide at first, taking care subsequently not to injure the roots.

Cabbage and Cauliflower Culture

Geo. Baldwin, York Co., Ont.

THE preparation of the soil is vital, although, be it understood that cabbages, like corn, will grow in almost any kind of soil, but not to the perfection they will on good soil. Clay loam is the most suitable. In the event of your soil being of a clay nature, endeavor to get some sand to incorporate with the clay, or if of a sandy nature try to get a load or two of heavier soil. In any case it is essential that you have some well decayed manure to dig in. Dig the soil the full depth of your fork or spade and turn in as much as three inches of manure if possible, because it improves the texture of the soil, while the fertilizers do not. It also is invaluable for supplying the necessary humus.

In the event of your being unable to procure manure, use one pound of nitrate of soda to every 400 square feet of soil. Throw this on broadcast, raking it in before setting out the plants. Set your plants out about two feet apart each way so as to give them a chance to get lots of air and enable you to use the hoe for cultivating until you are stopped by the cabbages touching one another. It is very necessary to continually cultivate, especially in dry weather.

GREATER RESISTANCE
One of the drawbacks to cabbage is that it is the many different insects which invariably attack the plant at different times. The principal ones are three in number, and include the cut-worm, the cabbage maggot and the green caterpillar. The first two attack the plants in their infancy and both at the roots. The first gnaws the stem right through and the second eats all the fibrous roots,

causing the plant to wilt and die. Last of all comes the green caterpillar, and just at a time when the heads are fully formed and you think that you are going to have a good crop.

One or all of the following remedies, while harmless in themselves, are sure death to the three pests mentioned: A dusting of lime (air slacked) mixed with equal parts of powdered sulphur, put on with an old pepper box about three or four times during the season will do the trick. Scatter it on and around the plant. Another good remedy is a half-pound of pyrethrum powder mixed with two pounds of common flour, sprinkled on and around in a similar manner. These remedies are equally good for savoy and cauliflower. Should you desire to grow some savoy, Drumhead is the best.

The cauliflower is the most highly appreciated of the whole cabbage family owing to its most delicate flavor. There is no reason why you cannot have as good cauliflower as cabbage. The secret, if it be a secret, of a most delicious and tender cauliflower is to keep it growing all the time by constant attention in the way of cultivating and watering in dry weather. The cauliflower is the most moisture-loving of the whole family.

To make it an ideal head, it must be properly blanched or bleached by tying or pegging the leaves up over the top to keep the sun's rays off. You will then have a beautiful snow white curd, even, uniform texture, and the absence of small green leaves sprouting between the sections comprising the head.



It's the Ford age—the age of dependable and economical transportation. More than four hundred twenty thousand Fords in world-wide service have changed distance from a matter of miles to a matter of minutes. Buy your Ford today.

Six hundred dollars is the price of the Ford runabout; the touring car is fifty; the town car nine hundred—f. o. b. Ford, Ont., complete with equipment. Get catalog and particulars from Ford Motor Company of Canada, Limited, Ford, Ontario.

"Intensive" Seeds for Intensive Farming

Bigger crops per acre!
That's intensive farming. That's what every farmer wants.

But to get bigger crops, you must sow better seeds,—intensive seeds.

Carters Tested Seeds

"Seeds With a Lineage"

By "Tested" we mean first, that Carter's Seeds are free from dirt and weeds, second that they are tested for germination and production as well as for purity.

Carter's test, therefore, is a triple, threefold test, and Carter's Tested Seeds are practically a sure thing, as sure as anything on earth can be. They never waste your money, labor or profit. They net you a greater profit.

At the famous trial and testing grounds of James Carter & Co., at Raynes Park, London, England, Carter's Tested Seeds are put to the real test of actual growing alongside seeds produced by rival growers.

Please write us your address so we can send you a free catalogue of Carter's Tested Vegetable and Flower Seeds—special edition, with all prices in American currency.

Carters Tested Seeds, Inc.

133 Q King Street East,

Toronto



The Influence of Bees in Orchards

W. White, Brant Co., Ont.



Grimm's Sap Spouts and Covers

The Grimm Sap Spouts are guaranteed to flow one fourth more sap than any Spout made, or money refunded. Price \$2.75 per 100.

Save Money By Using Grimm Covers.
The past Maple Syrup making season was a rainy period, and more sap wasted than would pay for the cost of covers twice over.

Price per 100
16-inch Galvanized Iron Covers... \$7.00
12-inch Galvanized Iron Covers... \$7.00

Now is the Time to Send Your Order
We are headquarters for all Improved Maple Syrup Makers' Utensils.
The GRIMM MFG. CO. LIMITED
55 Wellington Street Montreal, Que.

FARM AND SHOP BLACKSMITH'S FORCE 6.85
A well built portable Forge with 8 inch fire, 18 inch anvil, inside 18 inch high. Weight 100 lbs.
SOLE AGENTS - CANADA, U.S.A. & CUBA
The HALLOWAY COMPANY, Limited
100 KING ST. CANADA
FURNISHED BY STANLEY MILLS & CO., ST. LOUIS, MO.

CORN THAT WILL GROW

Money back if not satisfied
Send for Price List

J. O. DUKE, RUTHVEN, Ont.

Order Your POTASH AT ONCE

POTASH and other Fertilizer materials should be ordered at once so as to ensure early delivery and early application.

DO NOT DELAY - DELAY means late application. FERTILIZERS, with the exception of some sources of Nitrogen, should be applied as soon as the land is workable, so that the PLANT FOOD may be available to the young plants - thus ensuring a good start.

POTASH is an INDISPENS- ABLE Plant Food.

Muriate of Potash AND Sulphate of Potash

can be obtained from the leading fertilizer dealers and seedmen. Purchasers of "ready-mixed" goods should buy brands containing high percentage of POTASH.

Write for our FREE, educative bulletins on the important subject of fertilizing, and which contain interesting results of experiments. These include:

- "Artificial Fertilizers; Their Nature and Use."
- "Principal Potash-Crops of Canada."
- "Fertilizing Orchard and Garden"
- "Fertilizing Grain and Grasses."
- "The Potato Crop in Canada."
- "Fertilizing Hoop Crops."
- "Farmer's Companion," etc.

STATE WHICH YOU REQUIRE

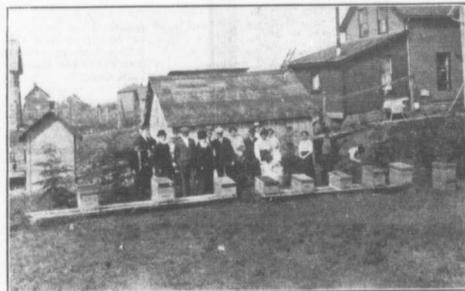
German Potash Syndicate
1102-5 Temple Bldg., Toronto, Ont.

EVERY fruit grower realizes the importance of good methods of cultivation in the orchard. It is doubtful, however, whether he appreciates the fact that in spite of all his improved methods his yearly income would be reduced to a minimum were it not for the labors of the hive-bee. He is, indeed, greatly indebted to the beekeeping fraternity, almost entirely dependent upon them, in fact, for his yearly crops. Prof. J. W. Crow dealt with this phase of fruit-growing in a deeply interesting address entitled "The Influence of Bees in the Orchard," delivered at an Agriculture Short Course at the Ontario Agricultural College, Guelph.

In his opening remarks he stated that at a certain point, the two lines of agriculture, fruit-growing and beekeeping, meet, forming a bond of mutual interdependence. In its

tion. A perfectly pollinated apple was better nourished, was larger and proved more resistant to disease. Prof. Crow described an experiment undertaken by him. Selecting 50 clutches of blossom, he cut them down to one blossom apiece, thus leaving 50 single blossoms. From each of these single blossoms he cut out four of the five pistils. He selected three other batches of blossoms, thinning the individual clusters down to single blossoms in the same way; but one batch he treated by cutting out three of the five pistils, the next, by cutting out two pistils, and the last batch, by cutting out only one pistil.

All the blossoms in the four batches were pollenized at the same time and by the same variety. In the case of the blossoms with only one pistil remaining, the fruit all dropped at an early stage. Not an apple arrived at maturity. In the lot containing



A Start has Already Been Made in Apiculture in New Ontario
This illustration is from a photo taken at the home of F. W. Ferguson, New Liskard, Ont., on the occasion of an apriary demonstration some months ago. Clover thrives in New Ontario and bees should thrive along with it. In fact, New Ontario is proving itself adapted to most lines of profitable agriculture.

search for nectar and pollen, the bee forms an essential agent in the fertilization of tree-fruit bloom and of nearly all bush fruits.

Fruit pollen, being heavy and more or less sticky, is not carried by the wind to any extent. Although a few wild native insects may assist in the pollinating process, fruit growers are dependent almost entirely upon the hive or honey-bee. In the case of the apple, wild fertilization is practically negligible. Under favorable circumstances, this latter agency may be responsible for from five to 10 per cent of the number of blooms fertilized. Prof. Crow remarked that he knew of a number of cases in which barren orchards had been brought into bearing in consequence of the introduction of colonies of bees to the neighborhoods in which the orchards were situated.

It was true that bees might possibly be responsible to some extent for the transmission of bacterial diseases of bloom. The gummy exudate material, laden with germs, was fed upon by bees, and in this way the bacteria were carried away by the bees. This, however, should not be held to be the fault of the bees. It was the duty of the fruit growers to cut out the diseased or blighted portions of the trees, and so destroy the source of infection.

Apple scab was usually found on the smaller half of a deformed fruit, because that side was weaker and incapable of withstanding disease attacks. The malformation of the apple was due to imperfect fertiliza-

tion. Two pistils to each bloom, two apples developed. In the two remaining cases, nearly the whole of the fruit developed. These results proved the importance of thorough pollination. As a pollination agent, the honey bee was by far the most effective.

Asking the beekeepers present how many colonies of bees were required for an eight-acre orchard, Prof. Crow elicited the reply from Dr. Burton N. Gates, Ph.D., of the Massachusetts Agricultural College, Amherst, Mass., that at least one colony was considered to be necessary for the complete pollination of 50 trees. Mr. Harkness, of Irena, Ont., considered this proportion insufficient.

Sprays and Poisoning

Prof. E. M. Straight

When we ask men to spray the garden, we are often met by the objection: "Spraying is all right, but we shall never put poison on that part of a vegetable which later we intend to eat!" When the case of potatoes is cited, which already they are spraying, we are again told that that is different, for the potatoes are under ground, while only the top is touched by the spray.

There can be no possible danger from this score. It has been shown that from eight to 10 barrels of apples must be eaten at one time, and immediately after spraying, to get any bad results from arsenic. A few days after an application, there is not enough poison remaining to kill a canker worm.

The same is true of copper. Thousands of sprayed plants must be eaten to get a tonic dose of copper, and many more are required to kill. A wagon load of colery must be eaten at one time to get sufficient copper to injure a man, so the danger is not great.

Single Tax at the O.A.C.

The students of the class in Public Speaking on Feb. 10th debated the subject, "It is solved—The Single Tax would be a great benefit for the People of Ontario."

The subject was selected by Mr. Trueman Morse, a student from Toronto, who led the affirmative.

Prof. L. Drew, who acted as critic, stated that the debate was handled in a way that would do credit to older men.

Although out of over a hundred present, only six knew what the Single Tax meant before the debate. A standing vote taken at the close of the discussion showed a large majority in favor of the resolution.

Ray down raspberries and blackberries and cover them with enough dirt to hold them close to the ground all winter. This should be done when there is no frost in the canes.

Asters, marigolds, cosmos, petunia, phlox, pansy, snapdragon, stocks, sweet alyssum and bachelor's button, will give good cut flowers when planted in the garden.

Homeseekers' Excursions and Settlers Trains to the West

Those taking advantage of above Excursions should bear in mind the many exclusive features offered by the Canadian Pacific Railway in connection with a trip to the West. It is the only all-Canadian route. Only line operating through trains to Western Canada. No change of depots. Only line operating through standard and tourist sleepers to Winnipeg and Vancouver. All the equipment is owned and operated by Canadian Pacific Railway, affording the highest form of efficiency.

Homeseekers' fares will be in effect each Tuesday, March 3rd to October 27th inclusive, and round trip second class tickets will be sold via Canadian Pacific Railway from Ontario points (Azilda and East) at very low fares—for example from Toronto, also West and North of Toronto, to Winnipeg and return, \$43. Other points in proportion. Fares from points East of Toronto will be slightly higher. Return limit two months.

Homeseekers' trains leave Toronto each Tuesday during March and April.

Each Tuesday during March and April the Canadian Pacific will run Settlers' Trains to Winnipeg and West, and for the accommodation of settlers travelling with live stock and effects, a colonist car will be attached to the settlers' effects train. This car will leave Toronto on regular train at 10:30 p.m., and on arrival at West Toronto will be attached to the settlers' effects train as mentioned above.

For those not travelling with live stock and effects, special Colonist cars will be attached to regular trains from Toronto, running through to Winnipeg without change. No charge is made for accommodation in Colonist cars.

Tourist sleeping cars are also operated on regular train leaving Toronto 10:30 p.m.

Full particulars from any C. P. R. Agent or write M. G. Murphy, District Passenger Agent, Toronto.

Raspberries Yield a \$1,000 Crop

John Buchanan, Kings Co., N.S.

FROM four acres of red raspberries last season I sold almost \$1,000 worth of fruit. The bushes were set out in the spring of 1910 in rows seven feet and nine feet apart alternately and twenty inches apart in the row. In a large patch this is an advantage when getting out the old wood, as a team and wagon can be driven down the nine foot

In the spring of 1911 the ground was hoed and cultivated and kept clean all summer. In spite of the severe drought of that season we picked 4,800 baskets from the patch. The old wood was removed as soon as the crop was off and the new canes cut back to about two and a half feet and not over four canes left in a hill; three was the average.

Last spring they were all hoed and cultivated, and during the dry spell of June they were cultivated twice a week. We took 9,000 baskets from them last season, and in August took the old wood out and cut the plants back as usual.

I believe in taking the wood out as soon as possible after the crop is off. It gives the new bushes a chance to form thick canes that will bear the weight of heavy snow and it also removes insects and borers that are working on the old canes before these have a chance to attack the new wood. Next spring, and yearly thereafter, these bushes will receive a liberal dressing of barnyard manure. As they were set on rich ground they have not needed it yet. We did not cultivate them again last fall, as we wanted all the new shoots that came up between the rows for new plants next spring, as we intend to set out 10 acres of them next season.

Keep the strawberry runners from setting too many plants. A judicious pruning of rank growing strawberries, such as Senator Dunlap, is advisable.

Poultry and Eggs Have You Any for Sale?

There are many thousands of people who would like to buy purebred poultry for breeding purposes. There are many more who would like to buy eggs for hatching.

Can you supply these people? Then it will pay you to tell them through Farm and Dairy what it is you have for sale. Your advertisement in these columns will cost you only \$1.00 for 10 lines; \$1.50 per inch of 14 agents lines.

Classified column, only 2 cents a word, cash with order. Make up your mind now to advertise in Farm and Dairy. It will pay you.

rows and have the brush thrown on from the seven foot rows.

The bushes were hoed and cultivated the first summer and made a fine growth before fall. In August the bushes were cut back to two feet and in October the bushes were strong and the canes large and they wintered well.



KEEP THEM WORKING

A horse in the field is worth two in the barn. You can't prevent Spavin, Ringbone, Splint, or Curb from putting your horse in the barn but you can prevent these troubles from keeping horses in the barn very long. You can get

KENDALL'S

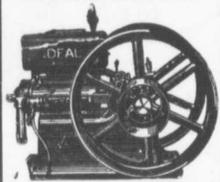
SPAVIN CURE

at any drugstore at \$1 a bottle, 6 for \$5, and Kendall's will cure. Thousands of drivers and horsemen will say so. Our book "Treatise on the horse" free.

Dr. R. J. KENDALL CO., Essexburg Falls, Vt.

GASOLINE ENGINES

1 1/2 to 50 H.P.
Stationary Mounted and Tractor



WINDMILLS

Grain Grinders, Water Boilers, Steel Saw Frames, Pumps, Tanks, Etc.
GOOLD, SHAPLEY & MUIR CO., LTD.
Brantford Winnipeg Calgary



To keep your traces in best condition, use

Eureka Harness Oil

It sinks into the leather and keeps it soft and strong. Free from acid.

In convenient sizes. Dealers everywhere.

THE IMPERIAL OIL CO., Limited
Montreal St. John
Toronto Halifax
Winnipeg Vancouver



THE "GEORGE" SHINGLE

TALK No. 6

ON THE

"GEORGE" STEEL GALVANIZED SHINGLE

If you have been following this series of talks on Pedlar's Metal Shingles, the many superior features which we have emphasized must have appealed to you as a progressive farmer.

Decide to-day to "PEDLARIZE" your buildings.

The big "GEORGE" Shingle (24 in. x 24 in.) for your barns, and the "OSHAWA" Shingle (16 in. x 20 in.) of identical quality and design, for your houses, sheds and smaller buildings.

Have perfect positive watertight lock on all four sides.

Absolute protection from Fire, Flood, Storm and Lightning.

Highest grade galvanized steel alone used. Every shingle triple inspected.

Preserve timbers by keeping dry and affording ventilation. Windproof.

Economical and rapidly laid. First cost is last cost.

If you have not yet written us, address our nearest branch.

Send for free booklet, "Roofing Right."

PEDLAR'S METAL SHINGLES PROTECT YOU FROM FIRE, WIND, WATER AND LIGHTNING

The All-perfect Metal Shingle. No greater cost, but greater service and satisfaction.

Get our prices on Siding, Corrugated Iron, Vents, Eaves Trough, Conductor Pipe, Finales and Ornaments. Every article is standard throughout Canada.



THE PEDLAR PEOPLE, LIMITED

OSHAWA, ONTARIO
ESTABLISHED 1881

Large and varied stock always carried at Oshawa, Montreal, Toronto, London, Chatham, Quebec, Calgary, Halifax, St. John, Sydney, Ottawa, Winnipeg, Vancouver.

250

How to Make and Manage a Hotbed

John Gall, York Co., Ont.

IN making a hotbed, the first step is to choose a situation on the south side of a building, wall or close board fence, when the sun from the north will be broken and all the sunshine possible will be obtained. After deciding on the site, the frame should be made. A simple frame may be made out of two-inch planks. It should be constructed in such a manner that it can be raised if necessary should the plants get too close to the glass. The frame should at least be six inches higher at the back than at the front, in order that the rain will run off readily and that the plants get more sunshine. The sashes generally used are three feet by six. The most satisfactory material for use in hotbed sash is double thick, second quality glass; sashes composed of this material suffer comparatively little breakage.

A hotbed may be made either above or below ground. If above ground, it may be made in any situation where the water is not likely to lie. The one below ground is usually preferable if it can be made where the land is high and well drained. To make the latter, the soil should be taken out to the depth of about two feet and about three feet wider than the frame so that there will be room for banking.

The banking is a very important part of the construction of a hotbed, as the conservation of heat in the bed depends very much upon it. Much labor will be required where the necessary excavation for the frame has been dug in the fall when there is no frost in the ground.

Horse manure is the best to use in a hotbed, not cold and rotten, and not already heated. It should be piled near where the hotbed is to be, and when it begins to heat it should be turned to make it of more uniform consistency. Five or six days after turning it should be quite hot and ready for use.

The bed is started from one end and the manure shaken in from a fork so that the long and short manure may be well mixed. When one layer is made it should be tramped well and then another layer started, and so on, tramping each layer well until the manure is the required depth. After the manure has been put in, the frame should be placed on it, then from the back to about six inches more manure put in and banked well around the sides of the frame, both inside and out. Outside, the manure should be banked to 12 to 15 inches in width. The bed is now ready for the lights. The frame should be so constructed that they will fit snugly. Shutters made of one-inch lumber, the same size as the sashes, are useful for covering them, as they help to conserve the heat in cold weather.

THE SOIL TO USE

In two or three days the sash should be removed, the manure given a tramp all over, making it level where necessary, and the sashes, soil put on. To get the best results, the soil should be of a rich character so that it will not bake. The soil should be from five to six inches in depth over the manure, and it is better to have it a little deep than too shallow. The soil when it is put in should come near the top of the frame at the lower side, as the manure will sink considerably, and the nearer the plants are to the glass, later on the stocker they will be.

In five or six days the hotbed will be ready for the seed, but it is necessary to wait until the manure has cooled a little and the temperature has fallen to between 80 and 90 degrees Fahrenheit. During this time, when it is hottest, some of the heat may be allowed to escape by raising the sashes a little every day. One should not be in a hurry to sow the seed, as if the temperature is too high the results will not be satisfactory. When the bed has reached the right temperature the soil should be spaded over a couple of times and the surface levelled and made fine with the rake.

The bed is now ready for sowing. The seed is usually sown in rows about four inches apart and about the same depth as outside. When the young plants come up the frame should be kept sufficiently aired by raising the back of the sash to prevent the plants from getting weakly or spindly, when the sashes should be damp off. Care should be taken to prevent their being chilled or frozen. The soil must be watered when necessary, care being taken not to overdo this, as the plants would then be likely to damp off. As soon as the plants are large enough they are pricked out into another sash or frame.

In What Does Good Spraying Consist?

M. G. Bruner, Essex Co., Ont.

IN WHAT does good spraying consist? First, in having a good pump, one from which the operator can force a good spray out too much labor. Too often a boy is put on the pump handle and a man, if there is much spraying to be done a man is needed on the handle; or, better, a power outfit.

Secondly, good spraying consists in having the proper mixture of solution to be used for whatever the operator is spraying. If for San Jose Scale and Apple Scab, I use one gallon lime-sulphur to eight gallons of water, when the trees are dormant. For the second spraying, which is done just as soon as possible after the blossoms have fallen, I use 1½ gallons lime-sulphur to 40 gallons of water, with 2½ lbs. of arsenate of lead. My third spraying is done eight or 10 days later, or before the calyx close. In this I use only one gallon of lime-sulphur but three lbs. of arsenate of lead.

As to the number of gallons to be used per tree, it is hard to say, as with me trees are of various sizes, from two to 50 years old. When I go to a tree I spray until I am reasonably sure that I have covered it. If all over, I always spray against instead of with the wind. My horses are always facing the wind. I always turn on the spray with my nozzle throwing the spray against the wind. I do not want much wind.

I have a power sprayer, with which I do the most of my spraying. I use a hose line of 30 to 50 feet long; one can get around the trees better; and do more thorough work than with short lines, which are so much pump man send out.

My last spraying, and one very essential, is on or about the 25th of May, with arsenate of lead for the second brood of Codling Moths. This spraying is for late fall and winter apples only.

THERE gives wives faction to times. They are given than table are with salt to taste or pickles or command 877.

The fact are from to who cultiv one-third of Ottawa plants in to decide locality is that will of experie consultat tics of the arrived at it would tion of Early Jaw derosa.

Their first earl do not sh and latest age season properly e give ripe the latter in the atmas if the ed with in paper a cellar. V goes thro and can be The plan house if and an Little box, loose planted in inches ap

Some Spl of the H Crown an ed

That Building you are going to do -

Safety
Appearance
Durability
Economy

The METALLIC ROOFING CO. LIMITED
TORONTO
King & Baiter Sts.
Manufacturers
Since 1880

Get the Cost

We make :-

"Estate" Steel Shingles, "Metallic" Clapboard, Brick and Rock-faced Siding, for houses, "Metallic" Corrugated Iron for outbuildings, "Metallic" Ceilings and Walls for the inside of the home, store or theatre, &c., &c.

WRITE TODAY

Bicknores Gall Cure

The old-time remedy for keeping horses free from sores. Don't lose the services of your high-class horses. Bicknore's Gall Cure cures galls and sore shiners without the horse's leaving. Approved remedy for Cats, Worms, Strachies, etc. Money back if it fails. Write for full particulars to the store for Bicknore's Gall Cure. Gray horse mark on every box. Sample and 8-page horse book sent on receipt of a postal note for price.

WINGATE CHEMICAL CO., Canadian Distrib., 449 Notre Dame St., Montreal, Can.

HIGH-GRADE BEE CORD, CLOVER, AND GRASS SEED FOR SALE

FLETCHER PAYS THE FREIGHT ON orders of five bu. and over to any station in Old Ontario. Special inducements to farmers and farmers' clubs. All orders receive prompt attention. Write today for prices.

J. A. FLETCHER R. R. 1, MERLIN

Do not sell your Surplus Stock now! Write out your Ad. for Farm and Dairy tonight. Tell our 17,000 readers what you have for sale

Make Your Stock and Poultry Pay Better with

Royal Purple

STOCK AND POULTRY SPECIFICS

At a cost of less than a cent a day per head of stock, it will increase their value 25 per cent. Permanently cures Colic, Debility, Worms, Bots and Skin Diseases, Tunes up run-down animals so that they quickly gain weight and vigor. Increases the yield of milk over three to five pounds a day, besides enriching the quality of the milk.

ROYAL PURPLE is not a food, it is a conditioner—the best ever sold. If there is any better we would be making it. It enables your stock to eat the natural food they should eat and get the best benefit from it. Here is the advice of all thorough veterinary doctors—"Feed your stock on food of your own growing"—not stamper them with soft predigested muck that after a time they cannot digest, good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, clover, etc. You know what these things cost you and what they will do.

ROYAL PURPLE is an aid to these natural foods and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "Prepared Food."

Try It On a Poor-Conditioned Animal

If there is a run-down, poorly nourished beast on your farm, use what ROYAL PURPLE SPECIFIC will do for it. A 50-cent package lasts a cow or horse 70 days. It is so trifling a cost that every farmer in Canada has any excuse for having out-also.

WE ALSO SELL

Royal Purple Cough Specific for cough and dysentery. (Will cure any ordinary cough in four days). 50c, by mail 60c.
Royal Purple Sweet Liniment for lameness, Rheumatism, sprained tendons, etc. 50c, by mail 60c.
Royal Purple Worm Specific for animals; removes the worms, also their larvae. 25c, by mail 30c.
Royal Purple Disinfectant, in 25c, 50c and \$1.00 tins.

health stock around his place. Try it on the poorest-conditioned animal you have and you will know you are supplied with the result of a short treatment. Cattle and hogs fatten up a month earlier than without it, which means you save a month's feed and a month's labor. You can bring six pigs to the pink of condition at the cost of \$1.50. Steers treated in the same way cost no more than \$1.00 cash to put in prime state for market. ROYAL PURPLE SPECIFIC fatten and keeps well horses, mares, colts, cows, calves, steers, hogs. Sold in packages, 50c, and straight tins, \$1.50.

Try ROYAL PURPLE POULTRY SPECIFIC on Your Hens

Do you know that ROYAL PURPLE POULTRY SPECIFIC makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the month, fatten and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from parts of the country. ROYAL PURPLE does not give you better results than anything you ever used, or gives you satisfaction, we will refund your money. No matter what your opinion of our preparations, we want you to give ROYAL PURPLE POULTRY SPECIFIC a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and \$1.50 straight tins.

Royal Purple Lice Killer for poultry and animals. 25c and 50c, by mail 30c and 60c.
Royal Purple Gall Cure for scratches, harness scalls, open sores, etc. 25c and 50c, by mail 35c and 60c.
Royal Purple Rasp Specific for roup, pile, diphtheria, typhoid fever, canker, white diarrhoea, swelled head, etc., in poultry. 25c, by mail 30c.

TO STOCK AND POULTRY RAISERS

We will mail for the asking our new revised 80-page book on common ailments of stock and poultry, how to feed light and heavy horses, colts, mares, cows, calves, steers, hogs also how to feed and keep poultry so as to get the winter and summer crop. Cover the utility birds in their natural colors. This is a book that should be in every farmer's possession. IT'S FREE. Write for your copy today.

W. A. Jenkins Mfg. Co. London, Canada

Tomato Culture at Its Best

Frederick Dure, Ottawa, Ont.

THERE is no garden crop that gives more pleasure to housewives — or, indeed, more satisfaction to those who appear three times per day about the family mahogany — than tomatoes. Tomatoes at table are always in order. Ripe, with salt, pepper, or sugar, according to taste, cooked as vegetables, or in pickles or sauce, they never fail to command the appetites of the hungry.

The facts given in this short article are from the experience of the writer, who cultivated a plot of less than one-thirtieth of an acre in the city of Ottawa. The photos are from plants in the plot. The first thing to decide when following suit in any locality is the variety or varieties that will be used. After a good deal of experience which was checked by consultation with the best authorities of the Dominion, the conclusion arrived at was that for a city garden it would be hard to beat a combination of Sparks' Karlana, Chalk's Early Jewel, and Henderson's Ponderosa. These ripen in the order named.

The first are good on account of their earliness, but for table use they do not show the quality of the later and latest of the three. In all average seasons, these three varieties, if properly cared for, can be made to give ripe fruit for the table from the latter part of July until very late in the autumn or even till Christmas if the late green fruit is gathered with the first frost and wrapped in paper and stored on shelves in the cellar. When so handled the fruit goes through a slow ripening process, and can be used as it becomes ready.

The plants can be started in the house if one has a sunny window and an even temperature indoors. Little boxes should be prepared with nice, loose, loamy soil, and the seeds planted in twos or threes about three inches apart. When they come up,

the plants which show the strongest growth should be selected to live and the rest nipped off. The seeds should be in the boxes from the first to the



The Staking Method

Mr. Davies, whose methods of growing tomatoes are described in the adjoining article, believes in pruning the plants severely and staking. The method of tying may be seen in this illustration.

In the middle of March, as under such conditions the growth is slow. Of course, if you wish you may buy the plants from the professional gardener. In regard to the training of the plants it has been the practice of the writer to allow two shoots of each plant to grow. All the rest as they appear in the axils of the leaves are nipped off. Then up go the ones selected to live. If properly cared for the plants will begin to bear close to the ground and will keep up the game until the autumn frosts prevent further expansion.

As the plants grow the new growth must be tied to the stakes before it can droop. The tying must not be too tight, but must allow for the swelling of the stem. If too tight the stem is pinched, and the sap prevented from rising. In tying a soft, cheap string should be used. A hard string or twine will not do so well as it cuts the tender surface of the stems.

Land for tomatoes should be rich, loose and loamy, but don't be discouraged if the land you have does not conform to this description. Work up what you have even if it be mixed with bits of brick and the scraps of broken china that have been thrown out of the house. Stir in a liberal supply of stable manure, and you will get results the first year, and better ones the next year if you stick to it. But, of course, the better the soil the better the results if all the other points are attended to.

There are other things than fruit and vegetables to be gained from handling a small plot of ground. Health, peace, contentment, knowledge and a preservation of man's best instincts are wrapped up in the cultivation of a garden.

Do poultry keepers realize the part that clean pure water plays in successful poultry keeping? Water makes up by far the greater portion of the body of the fowl.



Some Splendid Specimens of Tomatoes of the Henderson's Ponderosa Variety Grown according to the methods described in the article adjoining.

Fertilizer "Actions" that "Speak Louder Than Words"

Every farmer desiring to increase his farm profits will be interested in this Department of Agriculture Report on the "Acre Profit" competition held in Welland County last summer under the supervision of R. Austin, B.S.A., District Representative.

"Home Mixed"

Such as would be recommended by "Low Materials" combines. Competitor—Boy Macenzie Barron, Fonthill, Ont.

Crop: POTATOES
Fertilizer used on Acre: 500 pounds
100 lbs. Nitrate of Soda "Home"
300 lbs. Basic Slag "Mixed"
300 lbs. Potash

Also 8 loads of Manure.
Yield: 155 Bushels
Cost of Production: \$41.25
(Including rent of land, labor, cost of fertilizer, etc.)

Net Profit from Acre: \$134.5
(Average yield for Province, 1913-15 bushels at 60c per bush. in each case.)

"Davies Factory Mixed"

As recommended by those who realize that "Results speak louder than Words". Competitor: Will Crayler, Allanburg, Ont.

Crop: POTATOES
Fertilizer used on Acre—500 pounds
Davies 3-4-10 Potato 'Grower' (Factory mixed)
Also 6 loads of Manure.
Yield: 296 Bushels
Cost of Production: \$47.35
(Including rent of land, labor, cost of fertilizer, etc.)

Net Profit from Acre: \$135.25
(Average yield for Province, 1913-15 bushels. Marketable Potatoes valued at 60c per bush. in each case.)

These results show that increased profits can be made by farmers who use Factory Mixed fertilizers, and particularly those who use

DAVIES SPECIAL FERTILIZERS

The results of this competition show that although 100 pounds more of the Home Mixed fertilizer and two extra loads of barn-yard Manure were used, that Factory Mixed fertilizer netted a profit of \$102.50 per acre more than the Home Mixed fertilizer.

You should give these facts your most serious consideration. Now is the time to take action. Go to your fertilizer dealer today, arrange with him for the purchase of sufficient Davies' Special Mixed fertilizer to use on your farm crops this spring—500 pounds per acre is a good average application. Remember—Davies' FERTILIZERS—not only produce large crops per acre, but do so economically and also improve the quality of the crop, securing for you a more profitable harvest in every way. Write for our free book, "Farm Davies' Way." We have or want to have an Agent near you.

THE DAVIES COMPANY LIMITED

R. INNES, B.S.A. Manager, W. Toronto, Ont.

Say

"I saw your ad. in Farm and Dairy" when you write Advertisers. Then you get full benefit of our absolute Guarantee.

300 Bushels of Potatoes to the Acre—SPRAMOTOR

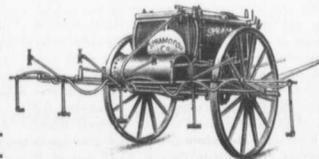
Isn't it easy to figure how soon a Spramotor pays for itself, at that rate. Then after that, it goes on saving you big money every year.

You want the efficient Spramotor for spraying potatoes, row crops, vineyards or orchards trees. Still, you get further use out of it than that. Spray crows during fly time and you'll get a better milk yield. Again, you can use your SPRAMOTOR for weed destruction—it's the best thing made for getting rid of weeds. Then if you think you should get still more from a SPRAMOTOR, why it will paint your buildings and whitewash your barns at half the cost and in a tenth of the time.

There's no excuse for any man being without this dollar maker. We have them in a big range of styles—for the small farm and for the biggest there is. Prices run from \$6 to \$360. Write us telling what you want a spramotor to do and we will send you full particulars of a machine that will do your work for the least money, also a copy of our valuable illustrated treatise on Crop Diseases, Free.

Heard
Soramotor
Co.

1782 King St.
London, Can.



FARM AND DAIRY

AND RURAL HOME
PUBLISHED EVERY THURSDAY.



SUBSCRIPTION PRICE, \$1.00 a year. Great Britain, \$1.25 a year for all countries, except Canada and Great Britain, add 50c for postage.

ADVERTISING RATES, 10 cents a line flat, \$1.40 an inch an insertion. One page 48 inches, one column 12 inches. Copy received up to the Saturday preceding the following week's issue.

UNITED STATES REPRESENTATIVES
STOCKWELL'S SPECIAL AGENCY

Chicago Office—People's Gas Building
New York Office—236 6th Avenue.

CIRCULATION STATEMENT

The paid subscription to Farm and Dairy exceed 16,000. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, and sample copies, varies from 17,500 to 18,000 copies. No subscriptions are accepted at less than the full subscription rate. 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, that it is reported to us within a reasonable time, and that we find the facts to be as stated. It is a condition of this contract that in writing to advertisers you use: "I saw your advertisement in Farm and Dairy."

Readers shall not ply 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 trading disputes between subscribers and honest business men who advertise, nor pay the debts of honest bankrupts.

The Rural Publishing Company, Limited
PETERBORO, ONT.

The Most Profitable Farm

The business principles that apply to city industries do not always apply on the farm. It is for this reason that city-bred critics, whose intentions may be the best, are not often in a position to advise farmers on their business. The advice most confidently given from city sources is something like this: "This is a day of specialized industry. The farmer must specialize as well as the business man. Take some one branch of farming and stick to it alone." Often they will refer to the statement of Mr. Henry Ford, of the Ford Automobile Company, that there is no auto manufacturer in the world who can afford to manufacture more than one style of car. They enunciate this as a principle that we farmers may well follow. For instance, make milk a speciality and market nothing else.

Elsewhere in this Special Horticultural Number one of the editors of Farm and Dairy tells of a visit to the farm of Mr. R. W. Ireland of Prince Edward county. On his 260 acre farm, Mr. Ireland has a large dairy herd and 50 acres devoted to apple and pear orchard. Mr. Ireland is also planning to add a side line in the form of Percheron horses. He believes that this combination of business is more profitable than any one line carried on separately.

Mr. Ireland is right. The most profitable farm is the one on which there are one or two specialties and several moneymaking side lines. A survey of several hundred New York state farms conducted by Cornell University some years ago, showed that without exception this was the style of farm that was most profitable. Those of Our Folks who have been specializing in dairying and are thinking of adding to their business might well consider the advantages of fruit growing as a means of adding to their income; that is, if soil and climate are suitable.

Canadian Northern Railway Finance

Opposition to any further Government assistance to the Canadian Northern Railway has become strong enough at Ottawa to assume a non-partisan aspect. Members of the Government declare that if any further assistance is proposed at this session of the House that they will resign their seats in protest. In an effort to calm the storm, Sir Wm. McKenzie has issued a statement in reply to the allegations of dissatisfied members, in which he attempts to prove that the Canadian Northern Railway has not been more generously treated by the Government than other lines of road.

Sir William points out that the cash bonuses to the road amount to only \$29,992,566 or about six per cent. of the entire cost of the road. This in itself does not look excessive. But it does not tell the whole story. Through bonds on land granted to the road by the Government, McKenzie and Mann, according to their own statement, have raised \$24,000,000. Bonds guaranteed by various governments throughout Canada amount to \$131,222,660. In addition to this, the company has the privilege of selecting 2,000,000 acres of Ontario land, which they will take near the railway and which may be valued at, at least, \$10 an acre, or \$20,000,000. In Quebec 749,540 acres are held which, at eight dollars an acre, are worth \$5,996,320. Hence the total assistance given by governments in Canada in direct cash subsidies, through land bonds and through bonds guaranteed, amounts to \$302,211,540. This is two-thirds of the entire cost of the road which Sir William estimates at \$453,319,232.

It is true that for a portion of this two-thirds the Government has only guaranteed bonds, but in case the roads were to prove a failure financially the Government would have to be responsible for these bonds and the credit of the country is affected to that extent. Almost twenty per cent. of the cost of the road has been given outright, the Government not even receiving common stock in return. These are Sir Wm. McKenzie's own figures. From independent sources come calculations that place the proportion of Government assistance much higher than this.

How the Money is Spent

The press of the country and members of Parliament who are opposed to further aid to McKenzie and Mann projects do not base their objections entirely on the assumption that the aid given to McKenzie and Mann is excessive. The statement has been commonly made that portions of this public money have been diverted from the purpose for which it was intended and used by these railway magnates for their own private ends. Sir Wm. McKenzie denies these allegations. It is well known, however, that McKenzie and Mann as a construction company have awarded themselves large contracts for the construction of the road and that without competitive bids for the work. It is being asked in many quarters if the large interests of McKenzie and Mann in power projects throughout Ontario and in Mexico are financed by excessive profits made on the construction of the Canadian Northern Railway.

All of these charges should be thoroughly investigated by Parliament. Then the people have contributed so largely towards the construction of a road they have a right to know that their money is being economically expended. Even if all moneys handed over to McKenzie and Mann have been economically expended, have we not done enough? When the road is completed we know that like all other railway companies the C.N.R. will establish its freight tariff for all that the traffic will bear. They will expect to make interest on every cent invested in the road, no matter from what source, which means

that the people of Canada will be expected to pay interest on all of the money they have handed over to the Canadian Northern.

The dissatisfied members at Ottawa do not see why the people of Canada should be called upon to study both principal and interest. Our Folks can encourage the members in their stand and aid them in making their revolt successful by writing to the leaders of both the Government and Opposition at Ottawa, filing their strong protests against further aid of any kind to the Canadian Northern Railway.

The Farm Garden

As regularly as the spring comes around Farm and Dairy advances its plea for more attention to the much neglected farm garden. We presume that just as regularly many of Our Folks decide to have a garden that will set a new record for themselves and make the neighbors look on with envy. We know just what follows. Help is scarce; the season is none too favorable for spring work; every energy is devoted to getting the land in shape and seeded with grain and corn crops; and the garden ends up as usual with a few string beans, a row of beets, and a row of carrots at one side of the potato field.

Farm and Dairy once advocated planting the garden at one side of the potato field, as we believed it would be less trouble to plant it there than in a small plot near the house and there would be more chances of the garden being planted. One spring an old friend took us seriously to task. "Who do you suppose," he asked, "has to pull the fresh greens and vegetables and pick the beans on the average farm? Why, the farm woman, of course. If you have the garden half way across the concession it means that much extra work for her, and she has enough to do as it is. No, sir; if you have any feeling for the women folk, advocate a good-sized kitchen garden just as near the back door as you can get it."

On thinking the matter over, we decided that our friend was just about right. Standard crops for use during the winter, such as the winter supply of potatoes, carrots, beets, and parsnips, can all be grown to better advantage in the field. Other garden truck that is called for almost every day through the summer, such as radishes, lettuce, early beets, beans and later on tomatoes, cucumbers, and so forth, should be grown in a small plot near the house. If along with these annual crops there are a few heads of rhubarb and an assortment of berry bushes, the farmer is in a position to have a table all summer fit for a king.

Ontario has much soil admirably adapted to potato growing. The climate is favorable. And yet in Ontario's own market towns Ontario potatoes are discriminated against.

A Potato Need. Last week on the Toronto market several cents a bag more for Maritime province potatoes than for the home-grown variety. The same discrimination has been noticed in the market for several years past. Why this difference? The answer is uniformity and good grading. Car loads of potatoes of one variety are almost as easy to secure from Maritime shippers as an equal number of bags would be from an Ontario shipper. Here is where Ontario growers might well get together. If all potato growers in a township would agree on some one variety of potato and then ship that variety in car load lots, discarding all the small and disease-affected tubers, they would soon secure a premium on the market. There are many good varieties that would be suitable. The Delaware is the favorite variety in the Maritime provinces. The Davies Warrior would probably be more desirable in Ontario. But variety is almost a secondary consideration. Uniformity is needed above all other things. Ontario has the quality now.

Are C

IS COMMUNIST propaganda? tion discuss Eastern Canada farmers have "stove" for Particularly native province where, in only orchards they can get assistance of fruit of the virtues merical sort that our s deficient in the soils of (One thing the hands and pay we Annapolis most in of heariness annual app Ontario decided in soils are w all the ele and fertili necessary fruit grow fertilizers the majori

A health him isn't r ing

Doesn't to the bes who wrote He saw T duldest our actually? It's this your adve strike the pective cu in its gra netized by the grouc

We are heavy bu the seaso want larg ews—orch ews, sea fencing,

How a their den your pla know you trade—pr securing more bou If you the seas should b They mu know the heavily in the good not allo

The co next few optimism largely a reader, y goods ar needs. I ast about who is g with "O ing of IS through DAIRY. "A Pa

Are Commercial Fertilizers Profitable?

E. F. Eaton, Colchester Co., N.S.

IS COMMERCIAL fertilizer a profitable proposition in the apple orchard? I have heard this question discussed in many sections of Eastern Canada. Many practical farmers have declared their faith in "store" fertilizer in my hearing. Particularly is this true of my own native province of Nova Scotia, where, in our famous Annapolis Valley orchardmen do not consider that they can grow good fruit without the assistance of acid phosphate. The faith of the Nova Scotia farmer in the virtues of fertilizer of the commercial sort may be due to the fact that our soils are naturally more deficient in phosphoric acid than are the soils of more easterly provinces. One thing is certain,—fertilizers in the hands of our fruit growers pay, and pay well. In fact the success of Annapolis Valley fruit growers is almost in direct proportion to the heaviness of the annual or semi-annual application of fertilizer.

Ontario fruit growers are not so decided in their opinions. Ontario soils are well supplied naturally with all the elements of plant nutrition and fertilizers are not so absolutely necessary. I have talked with many fruit growers, however, who do use fertilizers and endorse them. But the majority of farmers in Ontario

have not even given them a trial. Many of those who have, regard their experiments as time and money waste.

Farmers are not the only ones who disagree. College bulletins report experiments that justify widely different conclusions. A bulletin issued some months ago from a New England State College states that no beneficial results from commercial fertilizer applications were secured. Prof. Stewart, of Pennsylvania, still more recently has issued a bulletin giving his conclusions which are decidedly favorable to manufactured fertilizer. When our college professors disagree is it any wonder that we farmers are at variance in our conclusions?

But there must be profitable use for commercial fertilizers. If there were not commercial fertilizers would not have so many advocates. In the long run it just comes down to this,—that every farmer has different conditions of soil fertility to cope with. We all must study our own orchards, experiment with our own soil and then proceed accordingly. Such experimentation involves a little time and money, but it is well worth while, and pays big dividends. I would suggest a test such as the following as a valuable indicator of soil requirements:

In each plot have three to six trees and apply the following amounts of fertilizer per acre:

- Plot 1. Check plot.
- Plot 2. Nitrate of Soda 2½ lbs., Dried Blood 3½ lbs., Acid Phosphate 10 lbs.
- Plot 3. Acid Phosphate 10 lbs., Potash two lbs.
- Plot 4. Sodium Nitrate 2½ lbs., Dried Blood 3½ lbs., Potash two lbs.
- Plot 5. Sodium Nitrate 2½ lbs., Dried Blood 3½ lbs., Acid Phosphate 10 lbs., Potash two lbs.
- Plot 6. Same as plot 5, plus 12 to 25 lbs. of lime.
- Plot 7. Manure 400 lbs.

This check plan will have to be varied according to the fertilizers that are available in such small quantities as will be desired for such an experiment. Just a word of caution: I have seen fertilizer tests carefully conducted right up to the time the fruit is to be picked, and then the full benefit was lost because the crop from each plot was not carefully measured or weighed. The experimenters were in a guess and hence were in little better position to fertilize intelligently than before.

Such an experiment of necessity will extend over a couple of years as results are greater from fertilizer application the second year than the first. The most noticeable result the first year will be increased wood growth, healthier color of foliage and a stronger tree. This first year the fruit spurs are formed that will be the crop next year.

To deny that apple orchard ever requires fertilizer, as I have heard men do, is absurd. With average good crops a mature bearing orchard makes as great a draft on the soil as a 25-bushel crop of wheat. And who would attempt to grow wheat year after year without fertilizing! And yet some people expect their orchards to yield good crops of fruit in addition to a crop of hay or grain from the same land! We must fertilize the orchard. If we have not the manure for the orchard, and few of us have if we do justice to the rest of the farm, then we must be wise to investigate the commercial fertilizer problem carefully and intelligently.

DE LAVAL

CREAM SEPARATOR

the most important machine used on the farm

SOME BUYERS OF CREAM SEPARATORS DO NOT stop to think why their purchase of the best cream separator is of greater importance than the purchase of any other implement or machine of any kind used on the farm, or that matter anywhere else.

NEARLY EVERY PIECE OF FARM MACHINERY IS only used a few weeks during the year, if that long, and when it is used simply saves time or labor over some other way, with comparatively little difference between makes of such machines except in design or size or possibly that one is better made than another and so lasts longer and probably costs more proportionately.



THE FACTS ARE very different in the case of the cream separator, which is used twice a day every day in the year, and very different as between the De Laval and other cream separators because of the use of any other separator or creaming system involves not only the saving in time and labor a De Laval machine would effect, but an actual waste in quantity and quality of product a De Laval machine would save.

The Cream Separator the most wasteful or most profitable

THIS IS THE VERY GREAT DIFFERENCE THAT MAKES the cream separator the most important of farm machines, the most wasteful or the most profitable, because used so often and involving a waste or a saving every time it is used. This is the reason why there are more De Laval separators in use than of any other kind of farm or dairy machines the world over, and more than all the other makes of cream separators combined.

NO MATTER WHETHER YOU HAVE YET TO BUY A separator or are using an inferior machine, you must be interested in what a De Laval—not a 10, 20 or 30 year old one, but a De Laval machine to-day—would do for you, and that every De Laval local agent will be glad to make plain to you by the demonstration of a machine itself.

IF YOU DON'T KNOW THE NEAREST DE LAVAL agent, simply write the nearest main office as below.

De Laval Dairy Supply Co. LIMITED

MONTREAL PETERBORO WINNIPEG VANCOUVER

50,000 Branches and Local Agencies the World Over

AD. TALK

CCXXXI

A health unto the happy, a fig for him who frets, It isn't raining rain to me, its raining violets.

Doesn't that breathe the key-note to the best in advertising? The man who wrote that is a born advertiser. He saw the bright side of even the dullest outlook. Such a fellow could actually "sell the rain."

It's this optimism that you want your advertising to radiate. It must strike the proper chord in your prospective customer. It must hold him in its grasp. Human nature is magnetized by the optimist. We all shun the gloom.

We are rapidly approaching the heavy buying season of the year—the season when "Our People" want large quantities of new machinery—orchard equipment, plows, harrows, seed-drills, building materials, fences, and scores of other articles.

How are you preparing to meet their demands? Have you laid well know you are preparing for their trade—preparing to assist them in securing from old Mother Earth a more bountiful harvest.

If you are to secure your share of the season's harvest your goods should be known "Our People" now. They must know your goods and know them well if they are to buy heavily from you. People only buy the goods they know about and are not allowed to forget.

The copy you send out during the next few months must radiate your optimism. It must, moreover, be largely educational and give the reader a keen appreciation that your goods are suited to his particular needs. The man who is an enthusiast about his business is the man who is going to reap a big harvest with "Our People" in the spring buying of 1914. Let our service assist you through the columns of FARM AND DAIRY.

"A Paper Farmers Swear By"

"But that ain't it," persisted Mrs.

Strout; "I want you to go."

"Now, mother, you might just as well

stop right now," said Orlando calmly.

"I've promised Miss Rogers that I'd

take her over to the pavilion tonight

to look at the dancing. We shan't

dance ourselves, but she said she'd

like to go. She goes home to-morrow

morning early, and it is my last

chance to take her, and I'm going to

do it. All you want me to go to the

quarterly meeting for is to keep me

away from her and the dance.

He spoke to the horses and they

stepped forward. Mrs. Strout was

forced to move over, and as she watch-

ed her son hitching the span to the

work wagon she seemed trying to

think what to say. Her mouth open-

ed and shut several times, but with no

result, and finally, with an almost

horrific look of indecision and mysti-

fication, she retraced her steps to the

house.

All the afternoon she dwelt on the

subject of Orlando's untimely behavior,

and as she thought of it more and

more her anger rose higher and high-

er. It was time he was taught a les-

son, and by the time he came in to

supper she was ready to administer

justice. The hired man had readily

consented to carry Mrs. Strout to the

meeting, and as soon as the chores

were done he harnessed the team and

was directed to drive and get the

Simpson girls, who lived a half mile

in the opposite direction than the one

deny to "the sulks," that is when

things did not suit him, he said nothing,

and kept out of the way for a

while. It is very provoking to live

with a person who will not argue, if

one is of an argumentative turn, and

Mrs. Strout frequently called on all

her domestic gods to witness that

there never was such an aggravating

boy as Orlando.

Of late Orlando had taken to quietly

doing as he thought best about things

—no matter what she thought or said.

There was so little muster about it



"Aren't These Wealthy Apples Just Beauties?"

that she hardly realized it, as yet, but

it was true, and if she had been a

wise woman, she would have seen that

her reign was over. But her eyes were

blinded with the dust her own ener-

getic progress raised, and she did not

appreciate the real significance of all

this. It was still hers to command,

and to obey, or so she thought.

Presently she rose from the table

and followed him to the barn, where

he was harnessing the team—horses

for the afternoon's work. She was one

of those stout women who have no

suggestion of feshiness, and she

moved along like one who expected to

have the right of way, no matter what

was in her path.

"Orlando," she said, pausing in the

doorway, "I want you to take me to

to the quarterly meetin' at West Bixby

this evenin'. Elder Nowell is goin' to

be there, an' I want him to see you.

He ain't laid eyes on you sence you

was a baby, an' he was preachin' over

there."

"I'll have Joe hitch up in the two-

seated wacon an' take you," replied

Orlando, "an' you can take the Simp-

son girls. They'd love to go, I'm

sure. If the Elder wants to see me

very bad, why don't you invite him

over here for a day or two?"

they must take, while Mrs. Strout

finished getting ready.

While he was gone, Orlando came

in from hitching the driving horse

into the "bike" buggy, and sitting

down in the sink room, according to

his invariably custom, removed his

heavy work shoes and his soiled stock-

ings, filled the foot bath with water,

and went up stairs to bathe and dress

for the evening. The moment the door

closed after him, the placid figure of

his mother, sitting all ready for the

meeting in her black taffeta, rose,

and as lightly as a cat, busied herself

for a few moments about the sink

room, and made a trip to the cellar.

Then she returned to her post of ob-

servance at the window, went to the

door as the carriage drove up with

the Simpson girls, who were two women

of her own age, but "girls," in local

parlance, was helped in by Joe, and

they drove away.

Meanwhile Orlando, after bathing

and shaving, and changing his cloth-

ing, found that there were no clean

socks in his bureau drawer, and that

his best shoes were missing. Prob-

ably mother had not yet brought up the

washed hose from the week's wash,

he thought, and he must have left his

best shoes downstairs the last time

he came in with them on. Dressed all

but his feet, he went downstairs to

find his footgear.

And then he made a most astounding

discovery! There was not a sock

in a shoe belonging to him in the

house, apparently. He looked every-

where, but could not find anything to

put on his feet. Even his rubber boots

and the work shoes he had taken off a

few moments before, were gone! And

as he searched and wondered sudden-

ly it was all made plain.

His mother had hidden them think-

ing to keep him at home by that

means, secure from the wiles of the

"school-marm," and of the dance!

For a moment this idea flashed into

his head. Orlando stood motionless,

the flush of exasperation on his face

giving away to an angry look which

would assuredly have taught his

mother a lesson had she been there to

see it. Slowly the color ebbed, but

the eyes were filled with resolution.

He quietly locked up the house, and,

in his bare feet went to the barn,

climbed into the buggy, pulled the lap

robe over him so that his feet were

secure from the frost.

It was dusk when he reached the

Powell place, where Miss Rogers

boarded, and she was waiting for him

on the piazza, looking very pretty in

a lavender gown. Several other board-

ers were sitting there, too, as Orlan-

do drove up.

Miss Rogers rose and came down

the steps. Orlando leaned from the

buggy and said quietly, "Would you

mind getting in alone, Miss Rogers?"

Firerly is rather a handful to-night,

and it might be safer if I remained

here."

For a moment Miss Rogers looked

a little surprised, but a glance at the

metesome creature decided her that

there was reason in her escort's pro-

posal. She acquiesced smilingly and

Orlando cramped the wheel for her

convenience. Presently one of the

men on the piazza came down to

assist her, and they drove off, not,

however, without covert smiles pass-

ing between the other boarders at

what they half believed to be a display

of huicolic indifference to manners.

"I suppose you thought that little

queer," said Orlando, after they had

gone a short distance, "but the fact is

I had a good reason for not getting

out, though not the one I gave you.

You see—well, there, I may as well

tell you the whole story."

Whereupon he told her all about his

talk with his mother, repressing, how-

ever, her remarks about the girl her-

self, and about the predicament in

which he found himself. Lucille Rog-

ers listened in blank amazement, then

with a mixture of emotions which fin-

ally found expression, when he had

finished, in peal after peal of delicious

laughter.

"It's too bad too laugh," she ex-

claimed, when she could speak, "but it's

oh, it's so funny! And you came just

as you were?"

"Just as I was," repeated Orlando,

with smiling eyes, "do you suppose

I'd have let a little thing like that

keep me away?"

Lucille's eyes drooped in confusion.

He had never said anything quite

pointed as that before.

"We'll go to the store," he went

on, "and Sam Warren is a friend of

mine. He'll get me something to put

on my feet, and then you can see the

dancing at the pavilion."

The Upward Look

The Creator of the World

"Flower in the crannied wall,
I pluck you out of the crannies:—
Hold you here, root and all, in my
hand.
Little flower—but if I could under-
stand,
What you are, root and all, and all
in all,
I should know what God and man is."
—Tennyson.

These lines express magically the great universal heart-longing to know the secret of the power and majesty displayed in the creation of our world. How often the thought comes with overwhelming force; what are we? What is God?

It is like an intrusion into the Holy of Holies of one's being, to attempt a description of the Creator of our world. One can quite understand Spencer's feeling: "The history of religion has consisted of an ever clearer recognition of the impossibility, on our part, of a definite comprehension of the Power, hidden behind the veil of the phenomenal, so that to think that God is, as we can think Him to be, is blasphemy."

But our world is an expression of Himself. When we consider the

world of Nature around us, and think that it is only a very small part of the great universe, we must realize that there is some mighty power behind it all.

As Trine writes: "If there is life, there must be an infinite source of life; if there is wisdom, there must be an infinite source of wisdom. This infinite power is creating, working, ruling through great laws and forces. Every flower that blooms by the way-side, springs up, grows, fades, according to these laws. This spirit of Infinite Life and Power, that is back of all, is what I call God."

One sentence from McElhinny's "Origin of Life" is a great favorite: "The conclusions of science instead of putting God out of the universe, have resulted in conception of divine law, so far-reaching, so dignified, so all-pervading, so all-necessary, that it is to us no longer a mere belief, but a fact, as inevitable as the law of gravitation."

The world in which we live in essentially a rational one. This rationality is displayed in the mighty laws governing the movements of our planets, as well as in the exquisite formation of our minutest crystals.

But that the Creator of this marvellous world is most clearly revealed to us in our own hearts and souls, is of all the most precious, inspiring thought.—I. H. N.

Who Can Afford It?

I hate drunkenness; but I do not hate the drunkard.

If any man should have our friendship it is the man that has failed to be a friend to himself.

The fact is, the victim of strong drink often has all the virtues—including high intelligence and a tender, sympathetic heart—and yet when the demon Drink clutches him, his will is paralyzed and Satan is in the saddle.

A few weeks ago I visited the San Quentin prison and talked with a man in the "Death Row," who has since been hanged.

"It was drink—just drink," he told me. "I was crazy, I was jealous, and I shot her. Then I shot myself. She died quickly. I recovered to be sent here. Next week I die. She was a beautiful, honest, loving wife to me, but drink had destroyed my reason."

I said nothing—what could I say? But I realized that the slow, lingering death of a drunkard's wife is no more tragic than the quick taking off by knife or pistol.

The worst about strong drink has never been told. It can not be told—it escapes the limitations of language.

But I think we err in despising the drunkard. Our hearts should go out to him in pity.

A part of his hallucination often is that he is not a drunkard. "I can

quit any time," he says. But he who says that seldom quits until death stops his mouth.

"Wine is a mocker, strong drink is raging; and whosoever is deceived thereby is not wise." So said Solomon, a thousand years before Christ.

And the drink problem is upon us to-day, just as terrible, just as tragic as it was then.—Elbert Hubbard, in Cosmopolitan Magazine.

Iron-Rest on Ironing Board

A very cheap and satisfactory flatiron-rest can be made on an ironing-board by driving a number of large tacks into one end of the board. The tacks should be about one inch apart, and driven in only part way, leaving about one-fourth of an inch above the board in the centre and one-half inch at the outside edges. Then the hot iron cannot burn the wood and cannot slip off the tacks.

This iron-rest is always with the board and always ready.

The creaking of a door can be stopped by rubbing the hinge with a little soap or lard. If the door sticks, soap rubbed on the place where it binds will allow it to shut easily.

The teacher asked: "Elsie, when do you say 'Thank you?'" Elsie's face lighted up, for that was the one thing she knew, and she confidently answered: "When we have company."



Add water to milk—
You weaken the milk.
Add soft wheat to flour—
You weaken your flour.
Cheapens it too.
Soft wheat costs less—worth less.
Soft wheat flour has less gluten less nutriment.
Your bread is less nutritious, sustaining, economical.
Soft flour has less strength, less quality gluten.
Giving less good things for your money and things less good.
Use Manitoba flour—Manitoba hard wheat flour.
Having everything the soft stuff lacks.
Five Roses is all Manitoba.
Without a grain of cheaper wheat.
Strengthen your food values.
Use FIVE ROSES.

Five Roses Flour

Not Bleached



Not Blended

Our Coming Special Magazine Numbers

Dairy Magazine	April 9	Exhibition Special	Aug 27
Farm Improvement	May 7	Women and Household	Oct. 8
Farm Machinery	June 4	Breeders' and Xmas No.	Dec. 3

5,000,000 Ft. Belting For Sale
Rubber, Canvas, Leather, etc. 100,000 rods Wire Fencing, 40,000 lbs. Barb Wire at 3c per lb., 300,000 Ft. Iron Pipe, also 1,000 other bargains at 25% to 50% less than regular value. New lists made. Insured, sent free on request. Write immediately.
IMPERIAL MFG. SUPPLY CO.
QUEEN ST., MONTREAL, QUE.
All kinds of Machinery bought and sold.

264 Page Book on Silos and Silage

Best completed edition now ready. Most complete work on this subject published. Used as text book by many Agricultural Colleges. Gives the latest and most Modern Silage Methods—tells just what you want to know, 264 pages—indexed—over 45 illustrations, a vast amount of useful information boiled down for the practical farmer. Tells "How to Make Silage"—"How to Feed Silage"—"How to Build Silos"—"Silage System and Soil Fertility"—"Concrete or Cement Silos"—"All about 'Sawm' Silos" and the "Use of Silos in Feed Production." Ninth Edition now ready. Send for your copy at once. Enclose 10c coin and mention this paper.

Silver Manufacturing Co., Salem, Ohio

Send your Raw FURS to John Hallam

Many Thousands trappees now send us their Raw Furs. Why not you? We pay highest prices and require nothing but clean, sharp no commission and need money some days goods are received. Millions of dollars are paid traps each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE HALLAM'S TRAPPERS GUIDE

French and English. A book of 90 pages, fully illustrated. Gives laws relative to traps—tells you how, when and where to trap, bait and traps to use, and many other valuable facts concerning the New Fur Trade, also our "Up-to-the-minute" for quotations, sent **ABSOLUTE-LY FREE** for the asking. Write today—address **JOHN HALLAM, Limited** Mail Dept., 222, TORONTO 111 Front St. East.

The Passing of Power
(Continued from page 8)
Sam shouted, of course, and then became promptly helpful.
"I'll see what I can do," he said, and ran back into the store. He soon came out with a shoe box.
"Best I can do for you is a pair of sneakers," he said. "We're all out of your size in shoes."
"The sneakers will do," said Orlando. "You put in socks? How much is it? Oh, and Sam! A pound of your best chocolates, please."
After the buggy had driven away, Sam re-entered the store, and found his wife there, getting something from the showcase where the ribbons were. As there was no one in the store but the two, he told her the story of Orlando's disaster. They both laughed but presently Cornelia grew grave.
"That isn't going to help the old lady Strout any," she said. "Of course Orlando will probably pass it off with a laugh, but he's probably mad clear through, and it'll take her some time to get him to make up. I'll bet he'll marry all the quicker now."
"Cheerful place to see a bride home to," remarked Sam.
"Oh, didn't you know that Mrs. Strout owns the place where her folks lived when she was married? She's always said she was going to live there when Orlando took a wife, and have one of the Goodall girls live with her. You know they're distant cousins. Mrs. Strout left her nothing but money. The farm is Orlando's, free and clear, and I guess she got her share, at that."

Meantime, the young couple were enjoying themselves more than they had ever done before. Something about the unconventionality of the matter had broken down the wall of reserve which had always made each a little afraid of the other, and they chatted as freely as if they had known each other from childhood. Orlando had assumed his new footgear, but they did not mention going to the dance again. Instead, he drove along the "river road," where the calm beauty of the moonlight on the water, the winding, shady road, and the witching influence of the night filled them with a delicious feeling of joyousness.
Someway, as they rode along, Orlando found himself speaking quite naturally, and without a tremor, the words he had often laboriously tried to conjure up, but had always failed to secure. In a simple, manly way he told his love, and asked for her love and her life in return, and Lucille shyly bowed her head, and said that magic word for which he had hoped and prayed, ever since he had known her.
Then after a delicious interval they began making plans for the future. Orlando begged for a special wedding—indeed, had he had his way they would have turned back, secured the license, and been married that night, but his plan Lucille vetoed. She agreed to an October wedding, however, and it was agreed that she should board on at the Powell house while she was making her preparations for the event. She had no home but a city boarding house, and no relatives in the east, and readily fell in with Orlando's plans in this particular.
"But what will your mother say?" she asked at length, looking up into her lover's face, with adorable, shy eyes.
Orlando's face grew hard and bitter. "I don't care what she thinks or says," he said. "This last performance of hers is the most serious thing she has ever done to me, and it has disgusted me pretty thoroughly. When a woman treats a man of my

age like a naughty child, it is time she learned her mistake."

And then he told her many things about his home life, and the girl, listening, could read the whole story of the mother's losing fight to keep her son a child, and the power in her own hands, as long as she possibly could. But she saw more than Orlando. She saw that much of what seemed so hard and unreasonable, was prompted by love, and at last, when he passed she began in her soft, sweet voice.
"I know it seems hard, dear," she said. "But did it ever occur to you that it is hard on her, too? She has had control of you ever since your father died—since you were ten, did you say?—and has been the autocrat, the ruler, of the place, and of you. Now you have developed into a man, and the master of everything, and can you not see how hard it is for her to realize it, and realizing it, to give up the reins of government to you? She is a woman who loves to govern, I should say. Such people find it hard, but on others, to take this inevitable change in relation between themselves and their children, as they should."

"But she shamed me, she—"
"Dear," said his sweetheart, "don't you suppose she thought she was about to be asked to surrender in favor of your wife, her position in your life? That, too, is very hard for almost every mother, and probably she simply desired, in a blind way, to keep you from me, and in the grip of the desire, did as she did."
"We have to be patient with our parents, dear," she continued, in a low tone, after a moment of thought, "as well as our parents have to be patient with us. Your mother is sorry now, I know. Give her a chance, Orlando, please do!" And Orlando unconvinced, but silenced, promised.
Meantime Mrs. Strout was not enjoying the evening as had expected. The only thing she could think of was the trick she had put upon her son—her son, who had, in the main, been a dutiful and loving one. The longer she thought about it, the worse she seemed to her, and she began to fear that this time he had gone too far. Orlando's father had been a man of a sweet, sunny temper, but once roused, it was a long time before he could forgive or forget, and the latter was almost an impossibility, with him. Sometimes she had thought Orlando like him. Would he resemble him in this?
She was intensely relieved when the service was over, and they were on their way home. Now, at least, she could find out what he had done. When she found that he had gone out, and also discovered that he had not found the footgear which she had hidden, she was more disturbed than ever. Would he tell anybody? And if he did, what would they think? She passed a sleepless night, dwelling upon the matter, and rose the next morning expecting a scene with her son.
But Orlando appeared just as usual, though he said little. After breakfast, he was busied in the little sink room, over some trifles, and she went to him with a half-hesitating air, and laid her hand upon his shoulder.
"Orlando," she said, "I'm sorry I did what I did last night. It wasn't the thing for a mother to do to a grown son, but I was mad and ugly, and—and it seemed as if I couldn't bear to think of you goin' to that dance with that city school-marm. I ain't known one peaceful moment since I did it. Can you forgive me?"
Orlando looked down into the troubled old eyes at his shoulder, and the last bit of his resentment melted.
"I was awfully mad," he said at

(Continued on page 31.)



TANKS FOR EVERY PURPOSE

Fig. 1 We are proud of our well-deserved reputation as makers of high-grade tanks for every purpose. May we quote on your requirements for sheet steel or galvanized tanks? They have taken the place of round and unsanitary wooden tank.

ROUND GALVANIZED STOCK TANKS (Fig. 1). Adrift strength assured by beads instead of hoops. No place for dirt to accumulate. In a variety of sizes or to your order.

BARN TANKS OR DISTERS (Fig. 2). Made from heavily imported galvanized steel. Absolutely water-tight. Thoroughly riveted and soldered. Finished with heavy angle iron, greatly adding to strength.



Fig. 2

WAGON WATER TANKS (Fig. 3). Cover supported with angle steel. Fitted with man hole and outlet. Strong bulk heads.

MILK COOLING TANKS (Fig. 4). Cools milk rapidly and keeps it at proper temperature. Clean, sanitary and durable. A real convenience to the Dairyman.

GASOLINE TANKS (Fig. 5). For underground storage. A first-class tank that will not rust. Thoroughly riveted and soldered.

We sell the best Self-Measuring Pump on the Market.

These are a few of our many tanks. Let us know your requirements.

The Steel Trough & Machine Co. Ltd.

185 James St., Tweed, Ont. Fig. 5



Write for Catalogue. Yes

"Getting Blatch As good as



100 pounds Milk Substitu Send for part Cheaply and

G. A. GIL

WE SELL OIL

R. DILLON & SONS



Rid Bo There is

Savin to reasur

Flu

BOOKS at

AMER OR SEPAR

A SOLID PR... WINNER... AMERICAN S

When sowing to be as close to the transplants as possible, enough to that is best winds and amount of time, dig it. May it will ing. Be rake under flour, be seeds are very left in a it would be and the so very well a dry out to worked with for the seed sately in re broadcast. cover them and place the variety row and a will know when the

Sow each other, and you can y rows should ches apart them by seedlings r will be ab when they easier and

After the done, it is lightly with on which brush from blow idea of the for a much was no co tects them. Look after soil appear them, strarsary to un the wateri the seeds soil gradua little at a vantage to holds about ler; you gently an them out portant p it can be

When list as much In plant the soil a they work them good soil about After pl thorough plant is

The fr the variet planted i thus. It but if pla the back it is a happy fac

The ne bacco plant lightfu opecially morning, fashioned be great per and color Stock i should be noted for strain ginners ia



Feed Sweet Succulent Corn Until the Silo's Empty

You can keep your ensilage as fresh, sweet, succulent and palatable as the day the corn was cut—preserve it in perfect condition right down to the last forkful—if you have a

Natco Everlasting Silo

Built of verified glass hollow blocks; its glazed surfaces exclude air and moisture. The two dead air spaces prevent condensation from heat and cold. Each layer of blocks is reinforced by continuous steel bands.

Waterproof—Decayproof—Vermineproof—Fireproof

The Natco Everlasting Silo will last for generations—any man can erect it—never needs painting—no need to warp or shrink—no hoops to tighten—no repair bills—the first cost is the only cost.

FREE SILE BOOK—Full of information about ensilage—describes completely The Natco Everlasting Silo.

Write today for Catalog

NATIONAL FIRE PROOFING COMPANY

TORONTO, ONT.



HARTSHORN SHADE ROLLERS

Best the script name of "Hartshorn" on label. Get "Improved" no caulk required.

Wood Rollers Tin Rollers

FARM HELP

We are now organizing parties of Men and Boys for Ontario Farms to arrive February, March and April. If you are requiring help, for full particulars apply

BOYS' FARMER LEAGUE
Drawer 129 Wilmont, Ont.



Big Ben

8,760 Hours On a Drop of Oil

7,000 Canadian dealers say that Big Ben does more efficient work for less money than any other clock built. He's a regular glutton for good work.

In return for one little drop of oil Big Ben will work for you a full year. From "Boots on" to "Lights out"—365 times—he'll guarantee to tell you the time o' day with on-the-dot accuracy. He has made the same guarantee over 3,000,000 times and made good every time. He'll make good for you. More than \$5,000,000 has passed over good dealers' counters for Big Ben and his brothers.

A Big Ben battalion, over 3,000 strong, leaves La Salle, Illinois every day. Every one of them feels proud of his triple nickel-plated coat of impervious steel; his dominating seven-foot height; his large, bold figures and hands, and his big, easy-to-wind keys. No other clock can match their looks and ability to serve.

Things move with a will when timed with Big Ben. He'll make you gradually by ringing every other half-minute for ten minutes or read you in a hurry with one long musical time. But you'll look for more. You can read that time of the middle of his call, if you wish.

He is built in a fine new for live wires. And his best work has been on that farm. Before breakfast clothes are stashed right on time when Big Ben time sets. He never straggle. He runs on time, rings on time and stays on time.

If your dealer doesn't sell Big Ben, send a money order for \$5.00 to his makers—The Jones, La Salle, Illinois. He will come to your home to explain duty charges prepaid.

Vincent's Health Notes

How We Get Sick and Well

By E. L. Vincent

"I don't see why the Lord should send this sickness to me! He must think I'm pretty bad and need punishing!"

"You have heard that said more than once, and maybe had yourself wondered how it could be that so much suffering should come to one who might have done so much good in the world and who was so sorely needed at home. Just now these very words are ringing in my ears. They came from the lips of a farmer's wife, a woman of kindest impulses and far more than ordinary intelligence.

But, may I whisper it in your ear? I don't honestly think the Lord had a single thing to do with that woman's sickness, only as He made certain laws which you and I must live up to if we do not want to pay the penalty. I'll tell you how that dear woman came to be sick.

For months she had been working too hard. So many farmers' wives do just that thing. Their husbands do not notice it; they are busy with their work out on the farm and they do not see the tired look on the face of their dear one until it is too late. And she kept right on, day after day. Day after day she sat down to the table and ate with the rest. Sometimes she "had no appetite," seemed to her she just could not swallow a mouthful, but they all put in such a plea for mother to come and eat with the rest that she had to come.

She did not know that every mouthful she took when in that condition was just as much poison. The poor body was too tired to take the food and properly digest it and it became waste in the bowels, to make her suffer still more; perhaps living awake half the night to get up next morning and go on the same way another day. The grey look in her face increased. She was weak and fairly staggering about the house. Then came the crisis—the bed, the doctor, the long sickness. And that is how we get sick. How do I know? Because I have been right there, through it all, and I know from bitter experience. Now, how do we get well?

The road back is many times a good deal longer than the road down to the bed of pain. But there is a good deal more pleasure in it, after all. It is worth while to climb the hill back to health cheerily and with a heart ready to see all the bright things there are about the way.

The doctor can help—if he is a man of sense. Just few things he will do. The first thing he will say, "Now, let's stop eating a little while and drink." And he will give the poor, tired digestive apparatus a rest for which it has been longing and crying out for months. If there is good pure water to be had, he gives that very freely. In our own home we have for a good many years used a little water-still which takes any kind of water and turns it into the softest, purest liquid imaginable. This always sits on the kitchen stove and we all take a hand in keeping the splendid apparatus supplied with the water as it comes from the well, and we all share in drinking it. Sick or well, we plan to drink all the water we want from this still. To make it taste better we set it away and cool it, stirring it now and then to let the air through it.

And this the doctor does for the sick woman. Then he says, "We need every bit of the pure air we can get in your room. So let's raise the win-

dows high, as high as we can get them. Yes, night, as well as day. It is not true that night air is dangerous as some folks used to think. Get all you can of it. And breathe it clear down to the bottom of your lungs. When you take in a breath, just lift your abdomen up as high as you can. Then slowly let it out. This will rest you, and make your blood clear and pure. It will take time to do this, but we will win out all right. There is life in rest, pure water and all the fresh air we can use.

"But aren't you ever going to give her anything to eat?"

The friends about the bedside press



Does He Really Enjoy it?

This is Master Watson Tannahill, of Huntington Co., Que., and his dog Carlo. Isn't Carlo's expression one of long suffering toleration? Or does he really enjoy it?

that question until it gets to be a burden. They feel that the dear one is going to starve to death. It is the old, old notion that when we do not eat we will die. There is one thing I believe as firmly as I believe toleration? Or does he really enjoy it? that question until it gets to be a burden. They feel that the dear one is going to starve to death. It is the old, old notion that when we do not eat we will die. There is one thing I believe as firmly as I believe toleration? Or does he really enjoy it? that question until it gets to be a burden. They feel that the dear one is going to starve to death. It is the old, old notion that when we do not eat we will die. There is one thing I believe as firmly as I believe toleration? Or does he really enjoy it?

There will come a time when the system has worked off the dead cinders of the food which has been taken in those days so long ago that you have almost forgotten them. Through all it is worth while to climb the hill back to health cheerily and with a heart ready to see all the bright things there are about the way.

And the day will come when the sick one will say, "I am hungry now!" Gratefully! Now the way is clear! Carefully, at first, for the poor body is weak, but hopefully, now we may begin to give the sick one food. Nothing hard to digest, but the simplest possible and not too much of it. Better a little and have that turned into good pure blood, than much, to become a clog on the digestive apparatus.

And this is the way up again. — Successful Farming.

Napoleon's ears were rather small, well formed. The late Lord Salisbury had a massive and well-proportioned ear. Mr. Gladstone's ear had a curved hanging lobe. The ear was close to the head, and had a sloping position.

Annals to Transplant

Thos. Jackson, M. A. C.

When sowing annals that do better to be sown in the open and then transplanted when they are large enough to handle, select a place that is best protected from the cold winds and that will get the greatest amount of sunshine. If you have time, dig this this in the fall, and by May it will be in fine shape for working. Buke it well with the garden rake until it works down as fine as flour, because most of the flower seeds are very small. If the soil was left in a coarse or lumpy condition, it would leave the surface too open and the seeds would not be covered very well and consequently they would dry out too quickly. After it is well worked with the rake it will be ready for the seeds. Sow each kind separately in rows rather than sow them broadcast. After sowing the seeds cover them lightly, firm the soil well and place a label with the name of the variety on it at one end of the row and a stick at the other so you will know the name of the variety when the seeds should come up.

Sow each variety parallel with the other, and wide enough apart so that you can work with the hoe. The rows should be about ten or 10 inches apart. It is advisable to sow them by hand, as by so doing the seedlings make better plants. You will be able also to transplant them when they are large enough much easier and with better results.

After the seedling and watering are done, it is a good plan to cover them lightly with some good clean straw, on which is placed a few pieces of brush. This is to prevent the wind from blowing the straw away. The idea of this is to keep the soil moist for a much longer period than there is now covering at all. It also protects them in case of a severe frost. Look after them frequently and if the soil appears to be getting dry, water them, straw and all. It is not necessary to uncover them to do this. Do the watering in the morning. After the seeds are sprouted through the soil gradually uncover, taking off a little at a time. It is a great advantage to have a watering can that holds about two gallons with a sprinkler; you can then water the seeds gently and have no fear of washing them out of the soil. Another important point is to use soft water if it can be secured.

When lifting the young plants take as much soil as the roots will carry. In planting, place the young plants in the soil about the same depth that they were in the sowing bed. Make them good and firm by pressing the soil about the roots with the hand. After planting give them a good thorough watering. The best time to plant is in the evening or on a dull day.

The first flower I will mention of the varieties that have to be transplanted is the sunflower or Helianthus. This is rather a coarse flower, but if planted in the right place in the background, it is all right, as it is always smiling with its bright happy face.

The next I will mention is the tobacco plant. This is noted for the delightful odor which it throws off, especially in the evening or early morning. Snapdragon is an old-fashioned flower, but pretty hard to beat. This flower can be brought to great perfection both in point of size and color.

Stock is a well known annual that should be in every collection. It is noted for its delightful perfume. The strain I would suggest for the beginner is the mixed ten week stock.

In them you will have a great variety of color.

There are two classes of marigolds, the African and the French. The French class grows very strong, and the finest strains produce enormous flower heads, which are as dense as a knitted ball. They are of a dense orange or pale color or of intermediate shades. Although the plants are not quite hardy, they are quite easily raised.

French Marigolds are smaller than the African, double and single, tall and dwarf varieties. Some of the varieties are elegantly striped and spotted. The tall varieties grow about 20 inches high, and the dwarf about nine inches.

PETUNIAS

For anybody wanting a good strong bed of flowers the petunia is the best, especially the single variety. If the finest strains are procured and planted in a good open position, by the middle or end of June, they will be one mass of bloom, and will continue to bloom until the frost cuts them down. The double varieties grow well and well worth growing. It has handsome blooms, but they do not flower so freely as the single.

VERBENAS

The verbena is an annual that grows rather low and spreading. As in it is a vigorous grower, it should be given plenty of space in a good open position. If planted in a bed of border, they should be put well to the front, as they only attained a height of from six to 12 inches. They should be planted about 18 inches apart. There are many other annuals which I have not mentioned. The idea is just to get the farmer's wife interested in them, as that is accomplished they will be so interested and delighted that they will try other varieties afterwards.

Conserve Strength when Possible

Lillian G. Cummey, Leeds Co., Ont.

Upon calling at the house of a neighbor shortly after the noon hour I found the lady of the house engaged in washing the dinner dishes. I noticed that she did not stand at her work but sat on a high stool such as you will see in stores for the use of customers, on which was a soft cushion. This lady is not strong, and I thought what a capital idea to encourage strength.

The tired house-keeper may thus have many a rest by the road of life by occasionally sitting, while engaged in certain work, as washing and wiping dishes, peeling potatoes, and so forth, or even ironing or cooking. As long as the work can be done as well while sitting as standing why not take the rest even though it may be tried. The one who is wise will not be prodigal of strength any more than of time.

The editor of an enterprising journal in a mining town recently called at the home of the bride's parents the day after the wedding. He wanted to tell his readers all about the event, and wished to give the young couple a "good send-off" as well. The bride's mother met him at the door.

"Good morning, Mrs. Brown," smiled the editor. "I have called to get some of the details of the wedding."

"Oh, pshaw! That's too bad!" replied the matron, in dismay. "They're all gone. You ought to have come last night. They ate up every scrap!"

"You are too hard on Mr. Skinfint. You should treat him with more of the milk of human kindness."

"He'd churn it into butter and sell it if I did."



CHALLENGE COLLARS
 Acknowledged to be the finest creation of the collar ever made. Ask to see and buy no other. All are direct for sale.

THE ARLINGTON CO.
 65 COLLEGE AVENUE
 TORONTO

All "ARLINGTON COLLARS" are good, but our CHALLENGE BRAND is the best

RIDER AGENTS WANTED



everywhere to ride and exhibit a sample size Hylop Bicycle with counter balance and all latest improvements.

We ship on approval to any address in Canada, without any deposit, and allow 10 DAYS TRIAL. It will cost you a cent by the time you are satisfied after using bicycle to date.

DO NOT BUY of tires, lamp, or sundries at any price until you receive our latest and best literature and have received our special prices and attractive proposition.

ONE CENT to you to write us a postal card, enclosing and full information will be sent to you Free Postpaid by return of this card. Do not wait. Write it now.

HYLOP BROTHERS, Limited
 Dept. K. TORONTO, Canada

\$1.00 LEARN TO PLAY \$1.00 PIANO IN ONE HOUR

Without Notes or Teacher
 Our regular price is \$6.50. For one month we are going to sell our famous course for ONLY ONE DOLLAR as a SPECIAL INTRODUCTORY OFFER. The dollar only—no monthly payments—no agreement to sign—no anything except one "ONE DOLLAR BILL," and the course is yours, postpaid to any address. Our wonderful system is so simple and easy that a child can master it. Saves enormous expense of teachers, sheet music, etc. Surprise your friends and the world. Make money teaching the system to others. 30 popular songs in simplified form—Send your dollar today. you will find it the best investment you ever made and bless us for calling your attention to it. Further particulars sent on request.

Leader Sales Company, Dept. F. Toronto, Ont.

**Better Butter—
 Bigger Profits!**



If you wish your butter to be smooth and uniform, use the

"BRITISH" Butter Worker

Adopted by the best dairies in Gt. Britain and Canada. Makes the butter firm—even-consistent all through. Results in better butter and bigger profits!

Dep't. Sold by dealers everywhere.
 Three sizes—14 in., 17 in., and 20 in. wide.

DAVID MAXWELL & SONS - St. Mary's, Ont. 4

FREE

Now is your chance to make your home attractive. Until March 1st we will tell you free of charge, how this may be done.

Write us about any room you want to fix up and how much it will cost. We will send you free, samples of material with information how to use them, where they may be bought up to date.

Write at once. Ask us anything you want to know about fixing up your home. We will gladly give you the benefit of our experience free until March 1st.

BRUSH, HOME DECORATING COMPANY
 1 Liberty Street, New York, N.Y.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had some the most beautiful bay in the world. I wanted a fine horse, but I didn't want any of the man's horse. I didn't want any of the man's horse. I didn't want any of the man's horse.

So I told him I would not try the horse for a month. He said "All right," but he said "I'll give you back your money if the horse isn't right." Well, I didn't like that. I was afraid the horse was "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this is the thinking.

I make Washing Machines—the "100 Gravity" Washer.

I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it. But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. I know that I don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

Now, I know that my "100 Gravity" Washer will do it. I know that I can't wear the machine or tearing them, in less than half the time they can be washed by hand or by any other machine.

Now, I know that my "100 Gravity" Washer will do it. I know that I can't wear the machine or tearing them, in less than half the time they can be washed by hand or by any other machine.

Now, I know that my "100 Gravity" Washer will do it. I know that I can't wear the machine or tearing them, in less than half the time they can be washed by hand or by any other machine.

Now, I know that my "100 Gravity" Washer will do it. I know that I can't wear the machine or tearing them, in less than half the time they can be washed by hand or by any other machine.

Now, I know that my "100 Gravity" Washer will do it. I know that I can't wear the machine or tearing them, in less than half the time they can be washed by hand or by any other machine.

Drop me a line to-day, and let me send you a book about the "100 Gravity" Washer, that washes clothes in six minutes.

Address me promptly
 R. L. MORRIS, Manager, 1900 Washer Co., 37 Yonge St., Toronto.



1st PRIZE
BEST BUTTER

The Secret of good butter making is the Salt used

1400 Gravity Washers

Dairy Salt

Care of the Apple Orchard

By Allan G. Bland

TO economically grow an orchard into bearing is almost as important as to have it bear paying crops after that time.

Twelve years ago when I started apple growing, it was fairly well understood that trees should be cut back both root and branch when they are set out. If the trees are well developed I would urge heavy pruning at setting to the extent of two-thirds the length of the branches and half the length of the roots. I start the head 18 inches from the ground.

I set the trees in small holes and have a man tramp in the soil while the hole is being filled. The firmer the dirt is round the roots the better will the tree thrive. The small fibrous roots only keep the earth from going between the larger roots and up to the size of wire they are better removed.

CONDITION OF GROUND DESIRABLE.

The first summer the trees are better to be hoed every week from time of setting to the first of August. The next year, if labor is fairly plentiful, the hoeing is kept up, but the trees will do very well without any. After the first and second summer I kept the harrow nine inches away from the trees; grass allowed to grow on this strip. The harrowing is then only done back and forth in one direction, no cross harrowing being attempted. Couch has no bad effect when I save for a tendency to go to seed and to run into the cultivated ground. This running is not as much as might be expected, as the row of sod becomes matted.

Each fall I throw a couple of shovels of dirt up to the tree trunk to check mice injury. This forms a slight mound after a time, but does no harm. The width of the grass strip in the tree row may be increased yearly until at eight or 10 years it is three feet wide. In most cases I apply a nitrogenous fertilizer, such as 100 pounds nitrate of soda, put on early in the spring of the second and succeeding years. The fertilizing gives good results; potash and phosphates are not required till the trees come to bearing.

PRUNING

To obtain a well-shaped tree of varieties, such as Stark, Wagner, Spy, Blenheim, or Gravenstein, no more pruning is wanted after setting until the trees begin bearing. The suckers may be cut off from the ground to the 18 inch level, but I don't trouble over "crossing" branches or "too thick" tops. If you prune, you will have fine shaped trees and one-quarter to one-third of a barrel of fruit per tree at six or seven years' standing.

In the case of varieties, such as Dudley and Dudley's, I practice nipping the soft growth in July with the fingers to keep the branches shorter and avoid the excessive leverage of the long limbs, which these kinds are disposed to make. I start regular pruning at about four years with those varieties.

The object of pruning is to rejuvenate the tree and the reason so many varieties, such as Spy and Blenheim, because the yearly pruning has kept the wood too immature to bear apples.

At eight years old, I picked a barrel per tree off two different Spy trees and others had from one-quarter to one-half a barrel apiece. The trees are symmetrical, but of course very thick in the tops. The apples were large and well shaped.

Whether the grass strips between the trees planted one rod apart should be allowed ultimately to possess all

the ground as done by Mr. Macoun at Ottawa, or whether some method of heading back should be practiced, is a question which will bear investigation.

Delights in My Garden

(Continued from page 85)

To return to my nursery corner, after my fungus repast, I use my last year's hot-bed for this year's cold frame, simply digging it to the earth, and transplanting into it the lettuce and sowing radish seed. Cover with frames as in the case of the hot-bed, water daily and on cold nights cover the sashes with carpet or something of the kind.

Do you know the white "Ice-cream Radish"? It is the king of radishes, grows quickly in fine soil, is crisp, mild and transparent. The tops are small, but the bottoms are a constant surprise. I grow them in the early spring. During a dry, warm season, they grow too rapidly to seed, and I sow the seed in the autumn. Last November and until December I gathered splendid bunches of crisp beauties.

This is merely an introduction to gardening, but when the spring rains in us a desire for the green, the hot-bed and cold frame, asparagus bed, and first of all the garden cross and winter onions, they give us a supply of Nature's tonic, better than all chemists' nauseous mixtures.

Just a word about tools—light tools for women. Besides the necessary garden hoe and rake, have a digging fork and a light shovel for digging up roots and lifting soil. A potato hook is an excellent tool for loosening the earth. And last, but not least, buy an E-3 one-wheel cultivator, plow, scutler, hoe, banker and all combined. This is so light and does the work so quickly, you wonder if the work is not play. It pays for itself in one season, and is a woman's tool. Order it with your seeds from the seed-house. You'll not regret the outlay.



STANDARD Gas Engine Oil

Recommended by leading builders for all types of internal combustion engines, both tractor and stationary—gasoline and kerosene. Keeps its body at high temperature, leaves practically no carbon deposit. Equally good for external bearings.



PRAIRIE Harvester Oil



The most durable oil for farm machinery. Stays on the bearings; will not gum or corrode; not affected by weather.

Eldorado Castor Oil

Thresher Hard Oil

Arctic Cup Grease

Imperial Oil Co. service puts these products within the reach of anyone in the Dominion.

Write any agency.

THE IMPERIAL OIL COMPANY, Limited

Toronto Montreal Winnipeg Vancouver
Ottawa Quebec Calgary Edmonton
Halifax St. John Regina Saskatoon

Planet Jr.



No. 25 Planet Jr Combined Hill and Drill Seeder and Double Wheel Horse and Plow

A capital implement for large-scale gardening especially. It has a strong frame and complete seeding and cultivating attachments. The horse runs close to row without danger to leaves or roots. Two acres a day can be easily worked with this tool.



No. 4 Planet Jr Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow

This is a practical every day time, labor- and money-saver. It combines in a simple implement a capital seeder, an admirable single wheel hoe, furrower, wheel cultivator, and a rapid and efficient wheel garden plow. Shows all garden seeds in drill—w in hills 4, 6, 8, 12 or 24 inches apart.

You need these scientific soil-tillers to save time, lighten labor and get bigger crops from your farm and garden. Planet Jr tools are backed by more than 40 years' experience. They range from \$2 to \$100, and are fully guaranteed.

FREE Our new 72-page illustrated catalogue of the latest tools, for all cultivation. Write postal today.

S. L. ALLEN & CO
Box 0008 12025 Philadelphia
Write for the name of our nearest agency.



No. 16 Planet Jr Single Wheel Hoe, Cultivator, Rake and Plow

The highest type of Single Wheel Hoe made. It is light, handily adapted to use by man, woman, or child. Has leaf guard for close work, and a durable steel frame. A most useful tool in the family garden that makes the work really a spare-moment pastime.



No. 8 Planet Jr Horse Hoe and Cultivator

The best-known cultivating implement made. It is so strongly built that it withstands incredible strain, yet it is light and easy to handle. Has new steel wheel—will not clog with stones or trash. Cultivates to any depth and adjusts to any width. Opens and closes furrow, and hoers right up to plants without danger of injuring them.



No. 11 Planet Jr Double Wheel Hoe, Cultivator, Plow and Rake

The greatest cultivating tool in the world for the grower of garden crops from drilled seeds. It has steel frame. The slow-turning furrows for manure, seed, etc., and can be reversed for covering. The cultivating tool is adapted for deep or shallow work, and for marking out. Crops can be worked both sides at once 20 inches high.

HERE'S A BARGAIN THAT IS A BARGAIN WHY

First—Because we give you this beautiful China Tea Set, pictured below for **nothing** but a little of your spare time.

Second—Because this spare time could be spent in no more profitable way than getting your friends to subscribe to Farm and Dairy, even if you got no premium at all.

Third—Because we have had letters from over a Hundred persons who have received these Tea Sets from us and they all claim they certainly were **bargains**.



If you could only **SEE** these Tea Sets, we would not be able to pack them up and ship them out to you fast enough. But since you cannot see them, we will have to tell you about them as best we can. Here is a letter from a lady who has seen one and is now particularly anxious to get one:

Rednersville, Feb. 12, 1914.

Farm and Dairy, Peterboro.

Dear Sirs:

Have you any more Tea Sets like the one you sent to Miss Carroll Weese, Rednersville? It has just a plain gold band. If so, I will **GLADLY** get you Four new subscriptions for one. I do not wish a set decorated with flowers, as I already have one. If you very not one like hers let me know as I like hers very much, it just suits me.

Sincerely,

MRS. JOHN A. WILSON.

We have now Three Different Sets to choose from: Pink Roses, Yellow Roses, and the plain white with the gold band.

In answering please state which set you prefer

**A SET SENT TO YOU ON RECEIPT OF
FOUR NEW SUBSCRIPTIONS TO**

Farm and Dairy, Peterboro

Prince Edward County Growers Co- operate in Marketing

THREE years ago fruit growers in the neighborhood of Wellington in Prince Edward Co., Ont., decided that they were not getting as much out of their fruit as they should. They had heard much of cooperative marketing and decided to give it a trial. About 16 men, with orchards that averaged seven to eight acres of apples each, with Mr. P. A. Greer and Mr. Clayton Pettigill as moving spirits, got together and formed the Wellington Fruit Growers' Association. Mr. Pettigill is now secretary and manager. Recently, in the course of a few minutes' conversation, he explained something of the objects of the association and their success to date to an editor of Farm and Dairy.

"We are all like one family in our association," said Mr. Pettigill. "We talk together and work together. We have all been growing fruit long enough to have discovered the value of an interchange of ideas and now we have proved to our own satisfaction the value of working together for marketing. For the first two years of our association we got over \$1.90 a barrel for our apples, while growers outside of the association were getting only \$1.50 a barrel. This last year we sold our apples for \$2.75 a barrel packed, and they were nearly all Ben Davis. The small quantity of superior varieties handled by our association tends to keep the price

down. We are safe in saying that our association will bring us on the average 50 cts. a barrel more than we could get marketing independently of the association. We insist that all trees shall be properly sprayed, and hence we are able to guarantee the quality of the fruit that we market."

SOLVES PICKING PROBLEM

One of the great advantages of the association in Mr. Pettigill's eyes was that it tended to solve the problem of getting the fruit picked. "Our association employs the packers," said he, "and they go from orchard to orchard and pick and pack the fruit. We employ the men by the day and are able to give them continuous labor. Working individually, our members would be almost forced to pick and pack their own fruit and hence as scarce here as it is anywhere."

For the first two years the association, Mr. Pettigill explained, sold to big buyers. Last year they consigned their fruit, but the plan did not prove altogether successful.

"The big advantage of the cooperative society," said Mr. Pettigill as he reached the railway station, "is to the little fellow, the grower with, say, 50 bins to market in a season. I myself have 400 or 500 barrels and I could probably do almost as well marketing individually. We all like the society fine and no one would think of backing out."

Varieties of Plums for Canadian Planting*

F. M. Clement, Macdonald College, Quebec

THE time is ripe for planting plums of certain varieties. The demand will have increased very materially for good fruit by the time they come into bearing.

Plums, at present prices, seem adapted to large scale production rather than intensive plantings. The cheapest land on the farm, provided the soil is suitable, is the place for them. They thrive as well on clay as on the richest sands.

In those districts usually considered too cold for plum production some native varieties are likely to prove hardy. De Soto, Stodard, Wall and Hawkeye, and Cheney, do well with us. Cheney buds have survived 43 degrees below zero. These varieties will not likely ever prove serious competitors with domestic varieties in the open-market, but they are worthy of a place in the home garden and for local planting and it is the duty of our experiment stations to select or breed varieties that will thrive in the colder parts.

The tendency is to drop the once greatly lauded Japanese varieties for heavier plantings of Reine Claude, Green Gage, Niagara, Monarch, Grand Dukes, German prunes, Italian prunes, and, for the western markets, Damsons.

FOR COMMERCIAL PLANTING

I would recommend the following varieties for commercial plantings in the leading plum districts: Burbanks in limited numbers, provided the grower is prepared to thin so as to keep up the size; Bradshaw—one of the best canning and market blue plums. It is always in demand because of its quality, earliness and medium to large size; Reine Claude and the other plums of similar type for general market, dessert and canning purposes. The trees are often delicate and a little difficult to grow

*This article comprises the concluding paragraphs of a paper read before the recent annual convention of the Ontario Fruit Growers' Association.

but bring a good price and generally yield well.

Monarch—This is a large sized blue plum of medium quality. It is in good demand because of its late season and large size, and is a good bearer.

Grand Duke—A large blue and egg-shaped plum that is in good demand because of its late ripening, large size and fair quality. The egg-shaped plums are always popular.

German prunes are in heavy demand, are of the highest quality, and free from stones. They are adapted for dessert, cooking or making prunes and are one of the best sellers. Many were sold at 40 to 45 cents a gallon retail in Montreal this year.

Italian prunes have been very heavily planted. They are larger than German prunes and are expected to some day replace them. Damsons, Common Damson and Shropshire Damson bring the highest prices. It will pay to plant them for the western markets. They are used largely for preserving. Other good varieties are: Shiro, Quackomboss, Gueii.

The time to get rid of the weeds is when they are small. It doesn't take as much effort to kill them and they haven't taken as much moisture or food out of the soil.

The Milk Producers' Association of Hamilton met on Monday, Jan. 12, to discuss the advisability of organizing a company with a capital of \$200,000 for the purpose of distributing salt, fodder, mill feeds and other articles to farmers on a cooperative basis, and also to bring the city to the municipal corporation to cooperate with the producers in distributing this. The officers of the new association are: Peter Hay, Waterbury, President; Aunt Smuck, Vice-President; J. Allan Parker, Secretary-Treasurer.

had an lo
I'd make
But some
so much h
my courag
nearly me
that I ou
until you
the chang
told me
made you
that you'd
sorry. So
and thoug
think you
trick on a
give it. I

"And so
said Mrs.
"Yes, m
girl—"
She tur
moment,
son."

All that
with the
gained.
had poss
herself ha
was it, af
thought o
londo's ar
men amon
denied the
son? Wa
hot mate
fiercely.

She thou
men who
affairs of
sons. Ho
which not
answer ca
demand it
it a privi
privilege.

The Passing of Power

(Continued from page 24)

had as long's they could, and that I'd make some kind of a change. But some way Lucille and I got on so much better than usual, that I got my courage up—and she promised to marry me. And then she showed me that I ought to be patient with you, until you got used to the idea—of the changes that are coming. She told me 'twas your love, partly, that made you treat me like a child, and that you'd gone too far and would be sorry. So I did try to think that way, and though I think now, and shall think you played a mean, despicable trick on me, if you want me to forgive it, I will."

"And so ye're goin' to marry her," said Mrs. Strout, dully.

"Yes, mother, but she is a sweet girl."

She turned away, and said, in a moment, "I hope you'll be happy, son."

All that week Mrs. Strout struggled with the knowledge which she had gained. She saw now that her power had passed from her, and that she herself had hastened the evil day—or was it, after all, the good day? She thought of other young men of Orlando's age. They were considered men among men. Why, then, had she denied the same recognition to her son? Was he not their equal? Her hot maternal pride answered her fiercely. Of course he was—Perhaps their superior.

She thought of other mothers, women who had much to say about the affairs of their homes, and of their sons. How did they gain this power, which nobody grudged them? The answer came—because they did not demand it as a right; they considered it a privilege, and never abused that privilege.

She saw that the only way in which a mother can retain her power over her children is to recognize their manhood and womanhood, and to show that she desires, not to control them arbitrarily, but to guide them by her own greater experience. Bitterly she regretted that her wisdom had come thus late. She wondered if she could regain in any degree the position she had forfeited, and though she was very doubtful of it, she recognized that in Orlando's wife lay her chief hope.

She thought of the girl who had pleaded for her, but who had had the courage to oppose the ideas of her lover to do justice to a woman who had tried to keep him from her. She saw that the girl's influence had been all for harmony between mother and son, when the means of making discord had been ready to her hand, and she knew that such a girl must have a sweet and noble nature.

So, as she pondered these things, she came to desire to see her son's sweetheart, and soon asked him to bring Lucille over to tea some night. Orlando perceived that this was an additional overture of peace, and promptly agreed to do so. The next night was set, and Mrs. Strout devoted almost the entire day to cooking and cleaning.

She dreaded the meeting, but after her first look at the sweet and gentle face of the girl whom her son led towards her, all her fears vanished. In that one glance she was assured that Orlando had chosen wisely and well, and resolved that she would her part in making the girl whom her son had chosen happy.

Some butter makers prefer earthen crocks to tin vessels in which to set the milk until the cream rises. Of course the hard separator is to be preferred to either.

International Harvester Cream Separators



- THE I H C LINE GRAIN AND MAY MACHINES**
 Reapers, Reapers
 Mowers, Mowers
 Rakes, Rakes
 Hay Loaders
 Hay Presses
CORN MACHINES
 Planters, Planters
 Reapers, Reapers
 Suckers, Suckers
 Shellers, Shellers
TILLAGE
 Combinations,
 Pigs and Spring Toes,
 and Disk Harrows
CULTIVATORS
GENERAL LINE
 Oil and Gas Engines
 Oil Tractors
 Mower Spreaders
 Cream Separators
 Farm Wagons
 Motor Trucks
 Thrashers
 Grain Drills
 Feed Grinders
 Knife Grinders
 Binder Twines

A DAIRY farmer who does not use a cream separator is losing up to \$15 per cow per year. Complete your dairy equipment by the purchase of an International Harvester cream separator—Lily, Bluebell or Dairymaid. These separators skim closely—leaving barely a drop of cream in a gallon of milk—and they will do it for years.

These machines are furnished with pulleys for the use of power. Belted to a small I H C engine, you have the best outfit it is possible for you to buy. Note the low supply can on I H C separators, the height of the milk spout which allows a 10-gallon can to be used for the skim milk, the strong frame with open base which can be kept perfectly clean, and the dozen other features which make these I H C machines the best.

Your local dealer should have one of these machines on sale. If he has not, write us before you buy and we will tell you where you can see ours; also send you an interesting book on separators.



International Harvester Company of Canada, Ltd
 At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.;
 St. John, N. B.; Quebec, P. Q.



"THE HARDIE POWER SPRAYERS"

The Sprayer that is Free from Experimental Risks
OVER 6,000 IN USE

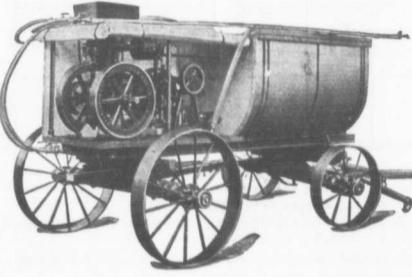
HARDIE FEATURES

SIMPLICITY OF CONSTRUCTION—Obtained by leaving out everything of a complicated and troublesome nature, using only such construction as long experience has proven best.

LIGHTNESS—Obtained by using high carbon pressed steel frames such as are used under all automobiles, in place of the big heavy timbers or heavy soft steel frames. We get four times as much strength with less than one-half the weight. Our machine frames only weigh seventy pounds and will carry a load of three tons. This same principle is carried out through the entire machine.

STRENGTH—Obtained by bearing in mind that anything is only as strong as its weakest part, by knowing where strength is needed, by using material which will stand the wear and tear of high pressure work.

HIGH CAPACITY—Our pumps are properly designed and are especially built by "Sprayer Specialists." We know the importance of lots of liquid at the nozzle and build accordingly.



HARDIE FEATURES

HIGH PRESSURE—We use a powerful engine on our machines and our pumps are so light running that we get the highest pressure. All of our machines are guaranteed to maintain a steady, working pressure of 300 pounds.

ACCESSIBILITY—(Get-at-ableness)—We build our machines so that you can get at any part in a moment. You never need to take a "Hardie" to the machine shop if an accident happens. You can fix it generally in the orchard. Any one who has ever used a power sprayer knows the importance of Accessibility.

STAY-THERE ROSE COUPLINGS—The kind that you can't blow off.

HILO SPRAY ROD—Throws the spray three feet or thirty feet as you want. Just a movement of the thumb does it.

ORCHARD SPECIAL SPRAY ROSE—The hose that has made good.

THE HARDIE TRIPLEX

Known as the "The Sprayer with the Trouble Left Out" used in over 6,000 of the best orchards of America. Many have been used for over ten years. They are noted for their Simplicity of Construction, Large Capacity, High Pressure, Light Weight and most important of all, Their Dependability.

Thousands of the most successful growers say their success is in a large measure due to the reliable and effective operation of this machine, which never fails, and which is always ready to deliver the spray to the tree in large volume and under high pressure.

Get our catalog and prices before you buy. You will save money, time and trouble by so doing.

DISTRIBUTORS FOR CANADA

The Biggs Fruit & Produce Company, Burlington, Ontario

Our Veterinary Adviser

WARTS ON UDDER—I have a cow with a very large wart at the side of the teat on the udder. What can I do for it?—E. L. Victoria Co., N. B.
Do the best you can until she goes dry. Then dissect it off carefully and dress the raw surface three times daily until healed with a five per cent solution of carbolic acid.

ABNORMAL APPETITE—I have a herd of cows all in good condition being fed on wheat, oat chaff, old cake, turnips and hay. They all seem to have a depraved appetite for bones and old sticks. They have access to plenty of salt. Kindly suggest the cause and a remedy.—R. E. T. Ontario Co., Ont.
This is due to want of phosphates in the system. Allow free access to salt, feed liberally on bran and feed a little bone meal, also give each cow two drams calcium phosphate three times daily until the habit ceases.

OESTRUM IN COLD WEATHER—I am not very successful in having cows come in least in winter months. Am feeding bran and cotton seed, one pound to four of milk. Some say I keep my barn too cold. Have plenty of light and fairly good ventilation, temperature from 40 to

45. Would you kindly suggest something to overcome this difficulty in manner of feed, care or drug?—E. W. T. Bromer Co., Ont.

The general experience is that oestrus does not occur as regularly in cold as in moderate weather. This is especially noticeable in mares and more or less so in cows. The administration of two drams *no vomica* three times daily in some cases appears to have the effect of encouraging its appearance, but on general principles, we may say, that when nature fails to act in this respect the administration of drugs or feeding special foods has little effect.

ABORTION—I have a pedigreed Ayrshire heifer of two and one-half years. She slipped her calf four months. Is there any truth in the idea that a heifer slipping her first calf will continue doing so?—W. C. C. Kootenay Dist., B. C.

Cows readily acquire the habit of aborting. It is not possible to say whether or not your cow will abort again. It will be wise to keep her as quiet as possible during the fourth and fifth months of gestation. Avoid all excitement, feed lightly on laxative food and keep as contented as possible until the critical period has passed. If she shows symptoms of

aborting give two ounces laudanum in a pint of water as a drench and, if necessary, repeat in two or three hours.

HORSE WILL NOT BECOME FAT—I have a horse and I have tried nearly everything but cannot get him fat. I only drive him three days a week, but he does not seem to get any fatter. He is a big horse. Is there anything else that will make him fat? I feed him rolled oats, bran, salt and molasses meal.—W. O. H. Halton Co., Ont.

Some animals appear to be congenitally of the "lean kind," while others remain lean on account of non-assimilation of the food. We infer that this horse eats sufficient food, hence all that can be done is to endeavor to stimulate the digestion glands. Mix equal parts of gentian, ginger, mix vomica, and bicarbonate of soda, and give him a heaped tablespoonful three times daily, either in damp food or mixed with a pint of water and given as a drench. Mix cut hay and his allowance of rolled oats and bran in a pail in the evening and pour boiling water on it; cover it up and give next morning for breakfast. Then mix another meal in the same way to be given in the evening. Feed whole oats, a little hay and a

couple of carrots or a turnip or mangle at noon. If you add a pint of molasses to his morning and evening meals you should get good results. Most feeders claim that they get better results from molasses than from the meal you mention. Exercise him every day and feed as much grain as he can take without causing digestion trouble.

COW FAILS TO CONCEIVE—I have a three-year-old pure-bred cow that fails to get in calf. I have had her in service regularly for the last 19 months. She dropped her first calf but failing to get her in calf since I called in a veterinary, who found the womb to be grown together. He opened it with an instrument, but each three weeks I find it grown together again. She is healthy and in good condition. Kindly advise what to do.—G. H.

Nothing more can be done than your veterinarian has done. It might be well to get him to operate again when she is in oestrus and breed her in one hour after the operation.

LEGS STUCK—Kindly tell me how to treat a mare that sticks in legs while standing in the stable over night. She is a heavy draft, four years old, a heavy feeder and has been working steadily all fall. She is a little fat. The legs stick out more than is usual. I give her salt, peat occasionally.—"Subscriber," Peel, Ont.

After fasting her for 12 to 14 hours give her a purgative of nine drams aloes and two drams ginger and then feed nothing but bran, until purgation commences. So soon as her bowels become normal give her regular exercise and give one and a half ounces Fowler's solution of arsenic twice daily for a week.

MAMMITS—In January, 1913 one of my cows freshened and lost use of one quarter of udder, right side back. She did not milk more than a quart in all year. She freshened again and I tried to take a little milk from her udder, but it was as hard as stone on the outside, same side as the bad quarter, and I was unable to get any milk. I used liniment, but it was no use. In the present I cannot get any more than two quarts a day, milking three times a day, and the udder remains hard. I feed her oat chaff and bran in small quantities until she freshens, and a dose of bran, cut shaves and a few turnips. All food is clean and stable is kept in good condition. Kindly advise as to what cause the udder udder. Do you advise taking milk from a cow before calving if she appears to have too much milk? I would not take any milk from the cow for about 12 hours.—W. D. Sisk

Your cow has mammitis (inflammation of the udder). One or more quarters may be affected. It is not uncommon shortly after calving, caused by the increased activity of the gland. It may occur at any stage of lactation from various causes. Some cows are particularly predisposed to attacks, especially those with tubercular disease of the udder. There is no means of telling whether or not there is tubercular disease except by the application of the tuberculin test by a veterinarian.

Remove the affected quarters three or four times daily with hot water, and after bathing it rub well with ramphorated oil and massage well. It is probable that if you give the case proper attention and feed lightly for a week or ten that she will yield a fair quantity of milk. As this cow, from some cause, appears predisposed to the trouble, it will probably be wise to not breed her again.

Your method of milking after calving is fair. The proper method is to milk a little (about the amount the calf would take if allowed to nurse) several times daily, the amount to be taken to depend upon the amount secreted. The udder should always be left rather full, just enough being drawn each time to prevent udder trouble. This system should be followed for at least three days, after which she may be milked dry two or three times daily.

FARM M

Oats on

Would like ad third time that although it is to grow grain, that is fairly, I use inches of ground. Would be the best of a good Co. Ont.
The best th would be, if it was to bring to mix with the inches of clay in the muck, the soil indeed such crops might be As to the b on such land.



Homestead Co. herd at Pine...

very so great and crop-prod would not like to illustrate. Experimental muck areas at all and b while who oas which oas and barley to

If one does question, the ette, as pro variety of g tions, as wh the straw is of the Joannee stand this s of the soil b know of.

The questi seed oats is somewhat edly mean sow in orde good catch with in wh the Joannee that could b banner wou ter than th is sown, the siderably t grass seed grain.—J. E

A perman ommed made up a

THE TWENTY-SEVEN PROBLEM

If YOU CAN SOLVE This PROBLEM!

As an advertisement we will give these awards absolutely and unconditionally free to the person sending in the NEATEST correct solution of the "TWENTY-SEVEN PROBLEM." There is positively no lot or chance connected with the solution of this problem. It is a contest of skill. The NEATEST correct solution of the problem will be awarded the Piano, and the other awards will be distributed in the order of merit. Everybody who sends in a correct solution will be awarded a prize.

- FIRST AWARD**
A Beautiful Doherty Upright Piano
Value \$425
- SECOND AWARD**
A \$375 Upright Piano for \$125
- THIRD AWARD**
A \$375 Upright Piano for \$150

6		
9		
	12	

- FOURTH AWARD**
A Beautiful Violin, complete with Case
- FIFTH AWARD**
A Handsome Guitar, complete with Case
- And 88 additional awards to the next 88 neatest correct solutions

DIRECTIONS—Take the numbers from 5 to 13 inclusive, and place them in the squares so that when added together vertically, horizontally, and diagonally, the total will be TWENTY-SEVEN. No number can be used twice. Use this or a separate piece of paper or other material.

The gentlemen who have consented to act as Judges are a guarantee that the awards will be distributed to those who are entitled to them.

In case of a tie, the Judges being unable to decide between any two solutions, each will receive equal awards.

DON'T DELAY, SEND IN YOUR SOLUTION QUICKLY, YOU MAY GET THIS BEAUTIFUL PIANO

All answers must be in our store on before Thursday, March 12th, 1914

Mail or Bring your Solution to Department A

DOHERTY PIANO CO.
COLONIAL BUILDING LIMITED
51 KING STREET WEST - TORONTO, ONTARIO

FARM MANAGEMENT

Oats on Swamp Land

Would like advice re a piece of swamp that I plowed up last fall. This is the third time that it has been plowed, and although it is level it is almost too low to grow grain, especially in a season that is rainy. There are about seven to nine inches of muck on top and clay underneath. Would like to know what would be the best variety of oats to sow to get a good catch.—V. J. B., Hastings Co., Ont.

The best thing to do in this case would be, if possible, to plow so deeply as to bring up some of the clay to mix with the muck. If say three inches of clay could be mixed with the muck, then a very satisfactory soil indeed should result and good crops might be anticipated.

As to the best kind of oats to sow on such land, I would say that muck

Alfalfa or Lucerne, five pounds.
Alsike clover, two pounds.
White or Dutch clover, two pounds.
Orchard grass, four pounds.
Meadow Fescue, four pounds.
Tall Oat Grass, five pounds.
Meadow Fxtail, two pounds.
Timothy, two pounds.
An annual pasture mixture in proportions suitable for one acre was given as follows:
Oats, 51 lbs.
Early Amber Sugar Cane, 30 lbs.
Common Red Clover, seven pounds.

Handling Cord Wood

By R. H. Flint

Cord wood is an important crop which is often very carelessly handled after harvesting. The wood is usually cut at the proper time of the year, during the winter, because labor conditions and weather are favorable then, but aside from this the crop is

Rennie's Seeds
Grow

the Finest Vegetables
and the Best Flowers
in the Land

Success in planting, whether it be in planting an entire garden, a bed of either simple or intricate design, or an extensive farm tract, depends upon many things, the principal one being the Quality of the Seeds.



Rennie's Seeds

are absolutely dependable — have been since 1870—44 years ago. Their reputation for uniform purity and fertility—a reputation that has always been strictly maintained—is YOUR assurance of success in planting.

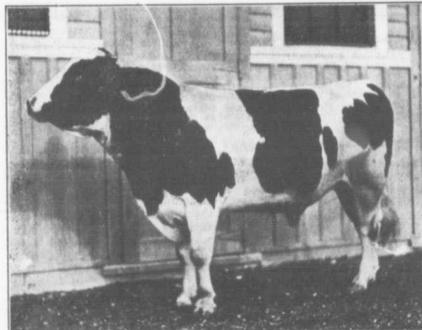
Rennie's Catalogs are unusually comprehensive and mighty interesting and instructive. They contain innumerable hints and suggestions of great value on cultivation. And the descriptions are not exaggerated, but can in every case be relied upon.

Send us your name to-day and we will send you these instructive Catalogs as usual

WM. RENNIE Co., Limited

Cor. Adelaide and Jarvis

Streets, TORONTO
Also at Montreal, Winnipeg and Vancouver



Never Beaten in the Show Ring

Homestead Colantha Prince Canary (1047), the leader of Wm. Watson & Sons herd at Pine Grove, Ont., holds the above distinction, having won first as a two-year-old, junior championship and, was grand champion at the National Dairy Show in Toronto last November. Three sons, four daughters and 12 females bred to him will be sold at their big dispersion sale on March 28. Every tested animal in this herd has qualified for the R. O. P.—the kind of hard workers all dairymen are out to secure.

vary so greatly in their composition and crop-producing powers that I would not like to venture an opinion. To illustrate, I may say that on the Experimental Farm here we have muck areas where oats will not grow at all and barley does fairly well, while we have other muck areas on which oats will do exceedingly well and barley thrives with difficulty.

If oats do well on the muck in question, then I would suggest Joannette, as probably as good as any variety to grow under such conditions, as when oats do well on muck the straw is usually a heavy crop and stand this straw-producing tendency of the soil better than any other I know of.

The question as to the best kind of seed oats to sow to get a good catch is somewhat indefinite and may possibly mean the best kind of oats to sow in order to permit of getting a good catch of grass and clover therewith, in which case I would say that the Joannette is still about the best that could be selected, although the Banner would probably stand up better than the Joannette; but whichever is sown, the seeding should be considerably thinner than where no grass is sown, it put down with the grain.—J. H. G.

Pasture Mixtures

A permanent pasture mixture recommended by Prof. C. A. Zavitz is made up as follows:

often very badly handled.

In felling and cutting into lengths a saw should be used in preference to an axe for two reasons: (1) the actual waste of wood in cutting with an axe must be considered. If a tree is felled and cut into lengths with an axe the loss in chips will seldom be less than five per cent of the total volume, if the tree is more than three inches in diameter, and it may run as high as eight or 10 per cent. With the use of a saw this loss is insignificant. (2) If the wood is to be sold there is likely to be a further loss in wood cut with the axe because of the rough, uneven appearance of the pile. A discriminating purchaser always prefers the pile with the smooth square ends left by the saw. Care in measuring off the length of the sticks so that all are of just the correct length adds greatly to the appearance of the product.

The practice of piling the wood on the ground where it is cut and leaving it to season until the following autumn or winter is entirely too common. The wood will dry better and have a much better appearance and a higher fuel value if it is piled on sticks made of small poles or defective stumps, to keep it off the ground. The pile should be located in a clearing and grass and weeds kept down around it to give a better circulation of air for seasoning and to prevent rapid decay. The danger from loss by fire is also greatly lessened by piling in clearings.

HOLSTEINS
FOR SALE

Hamilton Farms, St. Catharines, Ont.

Herd Headed by **PRINCE HENGVELD OF THE PONTIACS**
Son of King of the Pontiacs

See issue of Farm and Dairy, January 22, 1914.

BULL CALVES FOR SALE

Also **TWO NICE HEIFERS** bred to Herd Sire, \$150.00 each.

CLEARING AUCTION SALE

OF 25 HEAD OF REGISTERED

HOLSTEIN-FRIESIAN CATTLE

At Lot 7, Con. 6, Vaughan

Pine Grove, Ont., on March 18, 1914

Included in this sale are 4 daughters and three sons of the herd sire, Homestead Colantha Prince Canary (1047). He has never been beaten in the show ring, having won 1st prize as a 2-yr-old, Junior Champion and Grand Champion Male at the National Dairy Show, Toronto, Nov., 1913. Twelve females are bred to him. The females in this herd are large producers; all of those tested in the R. O. P. have qualified. They are of the ideal dairy type, and trace to the most fashionably bred individuals of the breed.

Write for a catalogue giving full particulars.

Sale Commences at 2 o'clock

WM. WATSON - PINE GROVE, ONT.

SAIGEON & McEWEN, Auctioneers

CLEARANCE SALE HOLSTEINS

THE 100-LB. KIND

At ORCHARD HILL FARM

Bloomfield, Ont., Wednesday, March 18

1 O'CLOCK, P.M.

A Breeder's Sale—The Entire Herd—Mostly Females—
Just a Score.

Not How Many! But How GOOD!! LISTEN!!!

Daughters of **KORNDYKE ECHO VERBELLE**—His dam, grandam and maternal sister are ALL 100-lb. cows, and together produced in one year R.O.P. Official Test over 62,000 lbs. milk.

Daughter and several gr.-daughters of **De Kol Plus**—106 lbs. milk in one day, over 22,000 in one year (Canadian Record when made).

Sisters of **Victoria Burke**—106 lbs. in 1 day, 30.82 of butter in 7 days.

(More 100-lb. blood in this Sale than several others combined)

"I have personally inspected these cattle and you will find them not only 'Bred' right but the females in milk, good square cows with splendid udders. They LOOK right." G. A. BRETHER, Sales Mgr.

As I am giving up farming these cattle must be all sold, together with Horses, Harness, Waggon, etc. These cattle represent the best foundation cows I could buy and their progeny from extra high-class bulls. The catalogue will tell you more of these good cows and their breeding. You are cordially invited to send for one and to attend my sale on March 18th.

W. J. GEROW, Prop., Bloomfield, Ont.

NORMAN MONTGOMERY, Auctioneer
BRIGHTON, ONT.

G. A. BRETHER, Sales Mgr.
NORWOOD, ONT.

Bales Bros., of Lansing, Ont.

Will Disperse Their Two Big Herds of

65 REGISTERED 65 HOLSTEINS

BY PUBLIC AUCTION

ON

TUESDAY, MARCH 24, 1914

The breeding of this stock will recommend them to every progressive dairyman. The mature cows have proved themselves producers of the right kind.

All of the young stuff practically are by Sir Lyons Hengerfeld Segis, who is out of Blanche Lyons De Kol—33-31 lbs. in 7 days. His sire is King Segis, who has a 26 lb. 2-year-old. Four 3-year-olds from 26 to 31 lbs., and a 31 lb. 4-year-old; 10 daughters that average 28.29 lbs. in 7 days, and 65 other tested daughters. Such breeding and performance is seldom combined in one animal.

If you need a Herd Sire, Mature Cows or Young Females get a catalogue and attend this sale.

J. C. BALES (Proprietors) O. D. BALES
LANSING, ONT.

J. H. PRENTICE
Auctioneer

(Reached by Street Car
from Toronto)

TERMS: Cash or 8 months on 6% notes



Another Case Where a Common Crop Paid for Commercial Fertilizer.

This illustration graphically portrays the results that have been obtained by Mr. F. Frouin, of Bagot Co., Que., with commercial fertilizer on ensilage corn. The corn to the left is from an unfertilized crop and yielded at the rate of nine tons an acre. The central was fertilized with nitrogen, phosphoric acid and with nitrogen and phosphoric acid and produced 14 tons. The right hand corn is from a plot fertilized with phosphoric acid and produced 14 tons. In some soils the phosphoric acid might be omitted. What the requirements of his soil are each farmer must determine for himself.

Our Legal Adviser

PAYMENT OF TAXES

Would you kindly tell me whether I am entitled to pay taxes on the value of the farm that I have rented or on the lease farm that I leased the farm for \$500 a year and my lease says that I pay the taxes on the farm. The farm could sell for lots which would amount to over \$50,000. I understand that paying the taxes on the farm, it would be the same as in Scotland, where the tenant and landlord each pay their share.—J. D. Chambly Co. Que.

As you have commented in the lease to pay taxes we do not see how you can be relieved from so doing unless some misrepresentation or fraud has been practiced upon you.

AID IN ROADBUILDING—In the neighboring municipality where the council is of the same stripe as the Provincial Government, they got \$600,000 on some bad roads through the township council giving an equal amount to said roads. Have you any knowledge of the present Provincial Government giving grants to municipalities on those conditions where the municipal council were liberal in politics? If so, would like to have the name of the municipality.—J. H. C. Hastings Co. Ont.

The grant referred to in your enquiry was, we presume, made under the Act respecting colonization roads, which has been in force since 1906, and which was revised during the last session. This Act provides that grants may be made by the Government to aid in the construction or repair of colonization roads or roads required to give access through unoccupied or sparsely occupied districts, or through districts unfit for cultivation or settlement, or such other roads as the Legislature, upon the recommendation of the Minister of Public Works, deems necessary for the proper settlement and development of such districts.

To take advantage of this Act the council of the municipality prepares a by-law in accordance with form furnished by the Government designating the roads to be improved and the amount to be expended therefor. The by-law is submitted to the Minister of Public Works, and if approved, a sum not less than one-third or more than two-thirds of the estimated cost of the work may be paid to the municipality by the Government. The work must be carried on under the supervision of an inspector approved of by the Minister of Public Works, and the work must conform to the prescribed regulations of the

Public Works Department. Upon the completion of the work a return under oath must be made, and the report is satisfactory a cheque for the Government portion is paid over to the municipality. All such by-laws must be submitted to the Department of Public Works, not later than 30 days after the commencement of the session, at which the money is to be voted.

The above Act was passed by the present Provincial Government, but the administration of it is non-partisan and non-political. The question whether the municipality seeking aid or the council thereof is Liberal or Conservative politically is not taken into consideration. To give specific instances the Townships of Bennington, Harvey, Galway and Dorro, in this county of Peterboro, each gave large Liberal majorities at the last local election in December, 1911, but, nevertheless, these townships have since received substantial aid for the construction and repair of roads under the provisions of this Act.

Up to the present time the Government has not rendered aid for the construction or repair of roads in the well settled and older portions of the province, but during the last session the Premier of Ontario announced his intention of introducing at the next session a measure for furnishing such aid, and a commission appointed by the Government is preparing a report on this subject, which it is expected will be presented to the Legislature at an early date.

YOU CHEESE and BUTTER-MAKERS!

That smooth, rich flavor in your cheese and butter comes from using a pure fine salt. Have you tried

PURITY SALT?

Before ordering your supply, let us prove that ours is

The Salt that Satisfies

By sending you samples from our own factory. You can be your own judge. We'll mail you prices too.

Write us to-day—you may forget it to-morrow.

WESTERN SALT COMPANY LTD.
Dept. "A" COURTHRIGHT, ONT.

Cost of

How much
cow for
of 10 the
mer will
per year
it costs
cows and
tell you
each year

In cons
duction,
only one
of keeping
authentic
been mad
cows for
mussen of
ures Mr.
mand st
in the L
tion of t
the price

from \$3
ritten \$2
\$35, and
is charged
corn silage
seen that

from \$3

from \$3
ritten \$2
\$35, and
is charged
corn silage
seen that

from \$3
ritten \$2
\$35, and
is charged
corn silage
seen that

Sophie 19lb.
st average
splendid
butter durin
nearly 1,100
cords indist
lar breeder.

cases higher
tions in Can
lower. The
what higher
sen's estimat
keeping a
SU

Cost of feed
Labor
Delivery
Housing
Depreciation of
feeding
Bull
Taxes and intere
Ice, coal and w
Veterinary exp
Tools, unusabl
Ow Test Assoc
cow per year

Manure
Calf

In other w
duce milk, cr
value of \$29
considered pr
point is that
usually the o
less than half
at an average
cow would pr
15,000 lbs. o
herself, or th
duct consider
Is this estim

2 Gone—6 to Come!

Frankly, Sir! You'll argue with us that it's a pretty good place for your ad, to be in Farm and Dairy—and especially so in one of all of our great Annual Specials like this one.

There are 6 more in this 6th Annual Series, 1914

Dairy Magazine, April 9th
Farm Improvement, May 7th
Farm Machinery, June 4th
Exhibition Special, August 27th
Women and Household, October 3rd
Breeders' and Amas, December 3rd

It will pay you to make a note of these and write us now about your reservation.

All clean, honest, **ABSOLUTELY GUARANTEED** advertising—mighty good company for your ad, to be in going out to prosperous Dairy Farmers exclusively!

"The Voice of the Dairy Industry"



A Sire That is Improving Our Standard of Holsteins

Sir Lyons Hengerveld Regis, the sire of most of the choice young stuff in the West. H. McKinnis and Balis Bros dispersion sales on March 5 and March 24, respectively, come of a line of blood that most breeders would like to introduce into their herds. His sire, King Sigs, has seven daughters with official records averaging over 30 lbs. His dam, Blanche Lyons De Kol, and her full sister, each have records of over 35 lbs. butter for seven days. The dam has also a 30-lb. daughter, and the grand-dam, Blanche Lyons, two daughters over 35 lbs. and two grand-daughters over 34 lbs. Offspring from this grand sire will make good the great herd foundation.

Benefits of Winter and Summer Pruning

(Continued from page 4)

grown under the grass mulch system.

I was fortunate enough to find another young orchard that appeared to be about twelve years of age and

composed of Baldwins and Spies. These trees had not been pruned since they were planted. They had been under cultivation part of the time and in grass part of the time. The Baldwins were in bearing, but the Spies had evidently not started to bear. The Baldwin trees were fine shaped specimens, but could have been improved by a moderate pruning. The Spies trees were uncultivated specimens, and their tops presented a broom-like appearance.

It is safe to say that some varieties would be better left unpruned until they reach the bearing age, and that others should have a moderate amount of pruning, and that a large part of this pruning should be done during the growing season. The character of the soil, of course, will exert a considerable influence upon the behaviour of a growing tree. Trees grown on light soil require less pruning than those grown on heavy soil. Drainage, also, exerts considerable influence upon the behavior of a tree, and the training of a tree on a well-drained soil is an easier proposition than that of training one on land that remains wet late in the spring.

I believe that with young trees we should do very little winter pruning, and that we should direct the growth largely by summer pruning. The work to be most effective should be done a little each year and at just about the time the tree completes its annual growth, which in this section is about the first week in July. If done too early it will defeat its aim and produce a strong growth of shoots. If done too late, it forces out soft growth which is likely to be winter-killed. The object of the work at first should be to direct the growth and later to induce fruitfulness. Only strong growing trees should be pruned during the growing season, remembering that it is a de-vitalizing operation and may easily be overdone.

With regard to bearing apple trees the necessity for summer pruning is less pronounced if not entirely eliminated. Since our mature trees tend to overbear there is no necessity for inducing fruitfulness, and winter pruning would therefore be the most logical practice. The problem is an intricate one, and since there is so much difference in the character of soils and the behavior of varieties, it is going to be difficult, if not impossible, to formulate any set of rules that any fruit grower may safely follow. The physiologist in time may be able to reveal the underlying principles in connection with the work of pruning.

WE WILL PAY YOU \$120 to distribute religious literature in your community. Sixty days' work. Experience not required. Man or woman. Opportunity for promotion. Sixty¢ per copy. Use—International Bible Press, 182 Spadina Ave. Toronto.

DON'T FORGET that we have still a few copies of Gleason's Veterinary Hand Book. You can secure a copy free by sending one new subscription to Farm and Dairy, Peterboro.

BUY PAGE WIRE FENCE DIRECT

The **BEST** is the **CHEAPEST** (Freight Paid), At The **Lowest** Cash Prices For Which **Good** Fence Has **Ever** Been Sold



STYLE	PRICE	PRICE
4 30 22	10, 10, 10	18.00
4 37 22	8, 9, 10	20.00
4 40 22	8 1/2, 9, 10	21.00
7 40 22	5, 5 1/2, 7, 7 1/2, 8	23.00
7 48 22	5, 5 1/2, 7 1/2, 9, 10, 10	23.00
8 42 22	6, 6, 6, 6, 6, 6, 6	26.00
8 42 16 1/2	6, 6, 6, 6, 6, 6, 6	26.00
8 42 22	4, 5, 5 1/2, 7, 8 1/2, 9, 9	26.00
9 48 22	6, 6, 6, 6, 6, 6, 6	29.00
9 51 22	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9	29.00
10 48 22	3, 3, 3, 4, 5 1/2, 7, 7 1/2, 8	31.00
10 48 16 1/2	3, 3, 3, 4, 5 1/2, 7, 8 1/2, 9, 9	31.00
10 51 22	3, 3, 3, 3, 4, 5 1/2, 7, 8 1/2, 9, 9	31.00
11 55 16 1/2	3, 3, 3, 3, 3, 4, 5 1/2, 7, 8 1/2, 9, 9	36.00

HERE are the lowest cash prices for which **GOOD** fence has ever been sold. They cover **PAGE WIRE FENCE—direct** to you—**freight prepaid**. And **PAGE** Fence, you know, is the finest farm fence in the world. It's made from the biggest and best carbon-steel wire used today for fences. Every knot is slip-proof. Every upright is evenly spaced. Every wire is woven under uniform tension. **Page Fences** are honestly made in every detail. They never sag nor bend nor rust. **Page Fences** last a lifetime—easily outwear several fences of the ordinary kinds.

SOLD UNDER GUARANTEE
Every rod of **PAGE FENCE** is sold under strict guarantee. If a roll of **PAGE FENCE** proves defective, return it and get your money back. Here's a guarantee without quibble, strings or red tape. When you buy **PAGE FENCE**, you're protected against fence-loss of any kind—money, trouble or time.

SHIPPED AT ONCE FROM NEARBY PAGE WAREHOUSE
Send in your order to the nearest Page warehouse. Enclose money-order or personal check. Get immediate shipment 200 pounds or over. Get it, per rod discount for carted orders. If you choose, send in your order through your dealer. We'll allow him to see rod for his trouble. Mail your order to-day and take advantage of these present low prices. They may advance any day.

FREE CATALOG
Write to-day for free copy of the big Page catalog, 104 pages. Hundreds of useful things for the farm. Pictures, descriptions and lowest cash prices.

Page Wire Fence Co., Limited
1142 King St. West - TORONTO (5)
MONTREAL ST. JOHN WALKERVILLE, WINNIPEG
"PAGE FENCES WEAR BEST"

STYLE	PRICE
5 36 16 1/2	8, 8, 10, 10
6 36 16 1/2	6, 7, 7, 8, 8
7 42 16 1/2	7, 8, 10, 10
7 26 8	6, 7, 7, 8, 8
8 48 16 1/2	4, 5, 6, 7, 8, 9, 9
9 36 12	3, 3, 3, 4, 5, 6, 6, 6
9 36 12 1/2	3, 3, 3, 4, 5, 6, 7, 8, 9, 9
10 36 12 1/2	3, 3, 3, 4, 5, 6, 7, 8, 9, 9

STYLE	PRICE
18 48 8	Close bars
20 60 8	Close bars

STYLE	PRICE
48	10-ft. opening
48	12-ft. opening
48	13-ft. opening
48	14-ft. opening

STAPLES, 25-lb. box, freight paid.
BRACE WIRE, 25-lb. rolls, freight paid.
STRETCHING TOOLS, Complete labor-saving outfit, \$1.00.

HOLSTEINS
OXFORD DISTRICT

The Holland of North America
Is the place to buy Holsteins of quality. The Third Annual Sale will be held in the city of Woodstock on March 25th, 1914. Full list of breeders in the Oxford District with post office and station addresses sent on application to
W. E. THOMSON - WOODSTOCK, ONT.

Holstein-Friesian Association of Canada
Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding **THE FARMERS' MOST PROFITABLE COW**, should be sent to the Secretary of the Association
W. A. CLEMONS, ST. GEORGE, ONT.

ANYONE WISHING HOLSTEINS OF THE BEST QUALITY

THE BRANT DISTRICT
Is the place to buy. It comprises some of the best herds in Canada.
Stock for sale at all times. Full list of breeders with post office and station address on application.
N. P. SAGER, Secy-Treas., ST. GEORGE, ONT.

Registered Holsteins
Our special offering is 2-year-old Heifers and young Cows in calf; also Bull Calves. Prices reasonable.
W. W. GEORGE - CRAMPTON, ONT.

Lakeview Holsteins
Senior herd bull, **COUNT HENGERVELD**, FAINE DE KOL, a son of **PIETERJES HENGERVELDS' COUNT DE KOL** and **GRACE FAINE END**. Junior bull, **DUTCHLAND COLON THA SIB MONA**, a son of **OLANTHA JOHANNA LAD** and **MONA PAULINE DE KOL**.
Write for further information to
E. F. OSLER, - BRONTE, Ont.

Hay Bay Holsteins and Yorkshires
Young Bull, ready for service. Bull Cows and several choice Young Cows and Heifers, due to freshen in Feb. and March. All sound and of the richest breeding for sale.
Yorkshire Sows, ready for breeding.
L. F. BOGART - BARDOLPH
Phone, Nanapan.

Holsteins For Sale
Two Choice Heifers, sired by Sir Ivens Hengerveld segis, the 4160 bull whose dam has a record of 35 $\frac{1}{2}$ lbs. butter in 7 days. Write or better come and see them.
EDGAR DENNIS, NEWMARKET ONT.

Cloverleaf Holsteins
FOR SALE
Young Bull, 13 months old, from a 25-lb. senior 3-year-old, official record 88 $\frac{1}{2}$ lbs. milk in 7 days. Sire, Sir Segis Count De Kol (Imp.). An extra good individual. Also other bulls fit for service. Four yearling heifers and a cow to freshen soon. Write for prices, etc.
A. E. Smith & Son, Millgrove, Ont.
Waterdown S. Station, O.P.R.
Phone 2205, Waterdown Exchange.

OUR FARMERS' CLUB
Correspondence Invited
NOVA SCOTIA
CUMBERLAND CO., N.S.

WALLACE HAY, Feb. 18.—Women's Institute meetings at the annual meetings of the various Farmers' Cooperative Societies are the principal items of agricultural interest at present. Institute meetings are well attended, interesting programmes are presented and the membership increasing. At our recent meeting "The Farmers' Cooperative Store" after four years' existence, reported that despite the stiffest of competition, more business was transacted during 1913 than any year before. This organization has done much to reduce the cost of living to the farmer. The Farmers' Mutual Fire Insurance Co. have met with their first loss in three years' operations. Considering the large number of policy-holders, this is very good. A cooperative creamery is now badly needed. The sooner in operation the better.—H. R. B.

QUEBEC, RICHMOND CO., QUE.
DANVILLE, Feb. 23.—Since my last writing we have had a long spell of cold weather, plenty of snow and roads in good condition. The ice-holes are filling rapidly while the cold weather lasts. Stock is wintering well, with plenty of feed. Eggs, 40c; butter, 30c; milk is retailing at 6c and 7c a qt.; cream, 35c a qt.; beef and pork remain high in price.—M. D. B.

ONTARIO, HASTINGS CO., ONT.
CHAPMAN, Feb. 23.—The weather continues very cold, the thermometer sometimes registering 24 deg. below zero. The local crop of feed seems to be sufficient but there is very little surplus for export. The roads so far have remained in very good condition, there being few drifts or patch holes. Hogs have risen in price to 85c and 87c.—H. S. T.

WELLINGTON CO., ONT.
FERGUS, Feb. 25.—The last two weeks we have been having very severe weather, it being below zero nearly every night, but today as a lot milder. There have been a lot of sales taking place, stock of all kinds selling high. Fergus horse fair; farmers expect it to help the horse market. The annual seed fair is to be held next month in connection with the monthly horse fair on March 11th. The Hydro-Electric railway has been surveyed from Fergus up through the northern part of this county toward Arthur, and it doubt will make the price of farms.—W. B.

BRUCE CO., ONT.
PAISLEY, Feb. 23.—We are having very frosty weather. Farmers are busy hauling logs. The horse market continues quiet. Cattle prices are lower. Hogs and sheep are in good demand. The acreage of spring grain is going to be greater this spring than last. Goose wheat has given good results here of late years, and the result is a very heavy harvest, even for good. There are not so many farmers leaving for the Western provinces this spring.—J. Mack.

It has been decided by the Directors of the Canadian Pony Show to publish Volume 1 of our Stud Book this year. All owners of ponies not yet recorded are requested to send in their registrations at once if they wish them to appear in this volume.—G. de W. Green, Secretary.

It has been decided by the Directors of the Canadian Shire Horse Association to publish Volume 1 of the Stud Book this year. All owners of Shires not yet recorded are requested to send in their registrations at once if they wish them to appear in this volume.—G. de W. Green, Secretary.

Maple Valley Stock Farm

17 Females and 4 Males will go under the hammer at your own price.
Will sell by Public Auction
20 Head of Imported and Canadian-bred
AYRSHIRES

At Russell, Ont., Tuesday, March 10, 1914

Many of the Females It is a chance to buy Good Breeding Cows and Heifers that carry the Best and Most Esteemed Blood.

GET A CATALOGUE AND COME TO THIS SALE
ROBT. MEHAREY, Prop. - RUSSEL, ONT.

Tuberculin Tested Holsteins

27 HEAD HAVE BEEN CATALOGUED
All the Matured Animals in this exceedingly well bred herd have been Tuberculin Tested and a certificate will be given with each.
Don't worry about Tuberculosis when you come to the
LAURELDALE FARM Dispersion Sale

Oxford Mills, Ont., Wednesday, March 11
Pontiac Hark of Lauredale heads this herd. He was sired by King Pontiac Artis Canada, and his dam Beauty Hark 2nd A has a butter record of 22.07 lbs. as a four-year-old. The former herd sire was Koryndale Laddie, a grandson of Sara Jewel Hengerveld Jr., butter 121.37 and milk 201.31 lbs. in 30 days, and afterwards sold for \$2,000.

Morning Trains will be met on day of Sale.
Get a Catalogue
W. H. MURPHY, Prop.
Lauredale Farm Holsteins
OXFORD MILLS - ONT.

A COMPLETE DISPERSAL SALE

OF MY
50 REGISTERED HOLSTEINS 50

Will be held at
ALFORD JUNCTION, MARCH 12, 1914
45 FEMALES 5 MALES

Practically all mature animals in B.O.P. or R.O.M. Choice young stuff from these dams. Note these—Hilda De Kol Princess—61 lbs. milk and 23 lbs. butter in 7 days. Spinks August Daisy, at 2 yrs. made 10.76 lbs. milk over 4% fat, butter 4.07 lbs. Another 2-year-old, Blanche Kay Beauty made 10.60 lbs. in a year. Fannie Jane Posh (5 yrs.) has a yearly record of 527 lbs. butter fat from 15.77 lbs. milk. Get a catalogue and look up the breeding of this herd.

As I am leaving the farm everything will be sold—complete farm equipment, horses, etc. on Mar. 11, and the splendid herd of Holsteins on Mar. 12, when rigs will meet all trains at Alford Jct'n.
Terms—Cash or 7 months at 7%.

For Catalogues write
H. F. Patterson, R. R. No. 4, Paris, Ont.
WELBY ALMAS, Auctioneer

HOLSTEINS OF QUALITY THE HOLLAND OF NORTH AMERICA

The Third Annual Sale of the Oxford District Holstein Breeders' Club
Will be held in the CITY OF WOODSTOCK, ON WEDNESDAY, MARCH 25th, 1914

80 HEAD of choice Holsteins will be sold subject to inspection. All cattle are being inspected before accepted to catalogue. Every buyer will have until removal of up to ten o'clock on the day after the sale to examine his cattle, and if they are not as represented your money will be refunded.
W. E. THOMSON, Secretary, R. R. No. 7, Woodstock, Ont.
No old worn-out cows, no three-tenters, no scrub bulls, nothing but the best. They are consigned by some of the most noted breeders of the age, and the best lot ever offered the buying public.
Sale at One o'clock in a well-ventilated building. Catalogues on application.
COL. D. L. PERRY, Auctioneer, Columbus, Ohio

MARKET REVIEW AND FORECAST

Toronto, Monday, March 2.—Most recent Dominion Government statistics show 1913 to have exceeded all previous years in the production of wheat and oats. Saskatchewan a banner wheat year with 121,587,000 bushels. Next in order come Manitoba, Alberta and Ontario. The total value of all farm crops raised in the Dominion during 1913 is estimated at \$32,771,500. These are enormous figures, but they are nothing to what Canada will be producing when our undeveloped agricultural resources will be more fully opened up.

Changes have not been exceptional on the farmers' markets. Hay and cattle are drabber, but dairy cows are in exceptionally good demand. Hogs continue to come from Western points to the Toronto market.

WHEAT

World statistics prove that the wheat crop of 1913 was the greatest ever harvested, the excess amounting to 1,000,000,000 bushels. At the same time the demand for wheat is good, cables from the Old Country being frequent. There is, however, little trade being transacted. Quotations now are: No. 1 Northern, \$1.01; No. 2, 99c; all-rail, 50c more; Ontario, 90c to 92c.

COARSE GRAINS

There are few changes to note in the coarse grain market. The trade in corn seems to be on the increase. Quotations now are: Oats, C.W. No. 2, 41c; No. 3, 40c;

Ontario oats, 35c to 37c; corn, 69c to 70c; barley, 57c to 58c; buckwheat, 76c to 78c; peas, 86c to 87c. Montreal quotations are: Oats, C.W. No. 2, 44c; No. 3, 43c; barley, ranging 55c to 60c; feed, 45c; peas, 87c to 82c; buckwheat, 50c; rye, 10c to 72c.

MILL FEEDS

Mill feeds are decidedly stronger. Quotations here are: Bran, \$23 to \$23.50; shorts, \$22 to \$22.50; middlings, \$22; Feed Flour, \$24 to \$25. Montreal quotations: Bran, \$23; shorts, \$22; middlings, \$22.

HAY AND STRAW

A weaker looking characterizes this market. Only odd lots are being shipped to the United States, and it is believed that farmers have a good supply of hay on hand in both Ontario and Quebec. Quotations here have not yet declined on account of the unwillingness of the farmers to part with their hay at a discount. No. 1, \$14.50; No. 2, \$10.50 to \$11.50; No. 3, 8c to 9c; baled straw, \$4.50. Montreal quotations have already declined. No. 1, \$13.50 to \$15; No. 2, \$12.50 to \$15; No. 3, \$10 to \$13.50.

POTATOES AND BEANS

Supplies from the Maritime provinces have been falling off during the past few days and prices have gone up accordingly. Ontario potatoes are now quoted \$1 a bag out of store; 50c in car lots; New Brunswick, 50c to 10c more. At Montreal wholesale dealers are paying \$2 to \$2.50 for Green Mountain and 80c for Quebec grades.

For Green Mountain and 80c for Quebec grades. Best quality quoted: Prime, \$2.20 to \$2.25; hand-picked, \$2.30 to \$2.35. Montreal dealers quote: Hand-picked, \$2.05 to \$2.15; 1st quality, \$2.15 to \$2.20; 2nd quality, \$1.85 to \$1.90 and prime, \$1.75 to \$1.80.

SEEDS

Merchants are buying farmers a bushel as follows: Aialke, No. 1, \$8.50 to \$9; No. 2, \$7.50 to \$8; No. 3, \$6 to \$7; red clover, \$2.50 to \$3; timothy, No. 1, \$1.75 to \$1.85; No. 2, \$2 to \$2.50.

EGGS AND POULTRY

Lower prices for eggs have induced a larger consumption. The Lenten season has also led to the demand for eggs. Consequently increasing receipts have not been followed during the week by decreasing prices. Wholesalers' quotations are as follows: New Laid, 50c to 55c; select, 35c to 40c; storage, 25c to 30c; retail at 40c. Receipts from States at Montreal have been heavy: Eggs, 20c; select, 30c; new-laid, 35c to 40c; live, 13c to 14c; spring chickens, 15c to 18c and 15c to 25c; geese, 14c to 15c and 10c to 11c; turkeys, 16c to 23c and 14c to 17c.

FRUIT

Storage stocks of butter in Canada will be just about sufficient to meet demand for the present largely. At present supply and demand are balanced. Farmers' separator prints, 25c to 25c; dairy prints, 25c to 25c; creamery prints, fresh, 30c to 35c; solids, 25c to 25c; store, 25c to 30c less. Quotations: New large, 15c; twin, 15c; twin, 16c.

LIVE STOCK

Live stock market last week opened in a manner which was satisfactory to the drover. Prices advanced 10c to 25c. During Wednesday and Thursday, however, the market lost all that it had gained earlier in the week, and this on comparatively small receipts. Even for first-class cattle the market was drabber. Choice butchers now run around \$8 to \$8.25, with common to \$6.75 to \$8. Heifers held their values more strongly and are quoted \$6.15 to \$8.10. Other quotations are: Choice cows, \$6.20 to \$7; com. to good, \$4.50 to \$6; butcher bull, \$4.50 to \$7.50; feeders, \$6.75 to \$7.30; canners and cutters, \$3.50 to \$4.50.

Milk cows are on boom the largest supplies are not sufficient to depress the market. During the last week one man has bought as much as 120 cows. Quotations for choice ones run from \$45 to \$120 and for average, \$20 to \$120, com. to med. cows, \$40 to \$60. Calves go at \$5 to \$11, according to size and quality. United States animals are steadily beginning to arrive on the market and will arrive in greater quantities as time goes on. Some-quantity quotations have decreased somewhat. Ewes, \$6.75 to \$7; culis, \$3 to \$5.

Hogs continue to arrive from Western points, being mostly consignees directed to packers. Quotations here, by country points, now run \$5.75 to \$5.95.

The Jersey heifer, Lady Edith, whose yearly record was given in Farm and Dairy some weeks ago, had an average test of 5.7 butter fat instead of 4.07 per cent fat, as published.

SALE DATES CLAIMED

Sale of 20 head imported Ayreshires, Mar. 10th, at Maple Valley Stock Farm, Russell, Ont. Lot of 400, at 11:30.

Sale of 36 Holsteins, March 11th W. H. S. of 15, Lauradale Farm, Oxford Mills, Ont.

Norfolk Holstein-Friesian Breeders' Association, Monday, March 16th, 11:30. R. O. P. Holsteins, Geo. H. McKenzie, Thornhill, Ont., Mar. 17th.

Clearance sale of Holsteins at Orchard Farm, Bloomfield, Ont., W. J. Gervoy, Mar. 24th, dispersion sale of Holsteins, J. D. Gervoy, Orchard Farm, Woodstock, Mar. 24th.

Dispersion sale of 25 head of Holsteins on Mar. 26th. W. A. Hartley, R. E. No. Woodstock.

Waples' sale of Holsteins, April 9th. P. J. Salby, Lachine Rapids, Que.

Gordon & Gooderham, Bedford Park, May 26th, Holsteins.

THE CHERRY CONSIGNMENT TO NORFOLK SALE

Concerning the line herd of Holsteins consigned to the Norfolk Sale, 15 Norfolk Breeders' Club Sale, Simcoe, Mar. 13th, it might be interesting to note that the dam of the champion was a record of 49.4 lbs. milk and 23.4 lbs. butter in seven days; 5.2 lbs. milk and 3.2 lbs. butter in 14 days. Another dam of Netherland Beauty Poach, 1107, at four years, 69.7 lbs. milk, 24.07 lbs. butter, in seven days, consigned to the Guelph Winter Fair, 1912. Her daughter, Ketchikan Beauty Poach's Favorit, was champion two-year-old at Guelph this year, giving 31.4 lbs. milk, testing 3.95. Later she made an official record of 47.5 lbs. milk and 21.18 lbs. butter in seven days, and 9.5 lbs. milk and 4.94 lbs. butter in 14 days. Another good daughter of Netherland Beauty De Kol is Netherland Schelling. This cow came within 100 lbs. of the record at the Toronto National Winter Sale, Nov. 1911, winning second place. She is the dam of Netherland Favorit, the Canadian champion two-year-old at Guelph, who was consigned in this sale. This heifer's record is 21.65 lbs. in seven days, 1,064.2 lbs. in 14 days.

Thus it may be seen that Netherland Beauty De Kol is not only the dam of many of the best Holsteins in Canada but of at least one Canadian champion and one two-year-old in the Dominion. The following are the records of Dec. test, 1913, bred Feb. 6th, 1914, at the same farm, giving 60 lbs. a day in two milkings.

Another good one is Eileen Eunice bred Feb. 1913, by Butter Boy, the sire of Netherland Favorit. Her record with first calf is 15.54 lbs. butter and 3.95 lbs. milk per week over 100 per cent. Her sister, Roxie Poach, from the same dam, has just completed a record of 15.54 lbs. butter and 3.95 lbs. milk and 23.35 lbs. butter in seven days; a good prospect for a 30-lb. cow next freshening.

Bessie Favorit is still another beauty from the same sire. Her dam at 11 years of age gave over 55 lbs. milk in one day; 525 lbs. milk, 19.25 lbs. butter in seven days. Her record at 16 years of age was 45 days after the sale at two years two months of age, and represents one of the nicest large milks in the Dominion.

These cattle are an exceptionally well finished lot and will be sold with a good butter and blanket on each. See catalogue from J. Alex. Wallace, Simcoe, Ont., and look up their breeding.

THE PATTERSON SALE ON MARCH 11 AND 12

Buyers who attend the big Patterson dispersal sale at Paris on March 11th and 12th will have an opportunity in almost every case of bidding on animals whose ability to produce is denoted by their records. Practically every animal of a milking age in Mr. Patterson's stable has been given a chance to show what she can do at the pail. Moreover, these tests conducted at Paris are among the long distance kind, and indicate the true value of the animals to those who want persistent milkers. In writing as a few days ago Mr. Patterson included the records of a fine cow, 1107, indicating the high standard his herd has attained through weeding out the poor ones.

Hilda De Kol Princess has a record at 10 years of 621.68 lbs. milk and over 35 lbs. butter for 63 days. Her record at 11 years of milk and 23.12 lbs. butter is what Blanche Kay, a nine-year-old, made in the same time. Over this three-year-old, Sevangene 2nd Snowflake, has 437 lbs. milk and 17 lbs. butter to her credit. At two years and three months Spinks August Daisy made 14.63 lbs. butter from 27.8 lbs. of milk. There are a number of other choice animals that

MANOR FARM

Write for beautifully illustrated catalogue describing some of the cattle, also giving a short extended pedigree of each one. We are very busy making official records. Watch the official reports in this paper for the results. They are very satisfactory.

No cows, no heifers, no bulls, for sale until May Twenty-sixth, Nineteen-fourteen, when you can buy them at your own prices.

MANOR FARM - BEDFORD PARK, ONT.

FAIRVIEW FARMS HERD

is the only place on earth that you can secure a young bull that is a brother to the sire of the cow holding the championship of Canada as well as the United States. Both of these records are held by cows that were sired by some of PONTIAC KORNDYKE. We can offer you a few of his sons at reasonable prices, also some of the greatest heifer bulls living today. A FULL KORNDYKE FIVE EIGHT, out of daughters of Pontiac Korndyke, with large official records. Write, or come and see this herd.

E. H. DOLLAR, HEUVELTON, NEW YORK, NEAR PRESCOTT, ONT.

WOODLAWN FARM

Offers for sale at a moderate price 2 Holstein Bull Calves. One 9 mos. old. Sire, Imperial, Merceus Scott. Grand sire, Tidy Abnerk 7 Merceus Sir Poach, whose dam and grand-dam average 37 lbs. butter in 7 days. Dam, Madia Netherland De Kol. Sire of dam, Sir Netherland De Kol Abberk. One 10 mos. old. Sire, Grace Fayne 2nd Sir Olantha, senior stock bull, Haley Hero, Springfield Dam, Johanna Netherland Madia. Sire of dam, Sir Johanna Poach. Inspection invited.

R. McNAMARA & SONS, R. R. No. 1, STRATFORD, ONT.

Holstein-Friesian "At Home"

Fellow Breeders and All Others interested in the Holstein-Friesian cow
YOU are cordially invited to attend the
4th Annual Consignment Sale of the Belleville Breeders' Club, Belleville, April 1st.

Originally, this yearly event was a Sale, it has Now developed into a very enjoyable Re-Union. Whether a prospective buyer, or just a friend of the cow, you will be given a Hearty Welcome. Plan now to be there and share in the benefits of such a meeting.

Sincerely yours,
G. A. BRETHEN, Sales Manager, Norwood, Ont.

maad ap
mark also
in the
this class
years, my
butter fat
her cent
Nelle, on
moyements
and 300 lb.
days, with
of 5.54
1913. Her
7/19 lbs.
to the
Auction
Beauty, I
sired for
10,50 lbs.
The Br
and 100
lbs. butter
and carried
to the
that our
days. The
of milk a
at least a
animal as
the profit
ing the a
breeding
dividual
tionary
young
suppleme
An M
absolutely
mechanical
and 100
the follow
Conway
who was
on the last
SEMI-OFF
FRIESIAN
L. Tottil
lbs. milk
made in
Ont.
E. Mechi
The
been ac
to the big
tario c
big sale
business
feared
overdon
those w
never
100 lbs.
hence it
them at
An ad
help me
FA
17,600 lbs.
Hospital
G. Queen
9, 10,000
4, Helms
12,283 lbs.
ter: Wm
I. Johann
16,17 lbs.
ter: F. A
21.2. Centre
12.3. 16.65
butter; Ja
3. Delah
1.681 butter
4. Maple
15,991 lbs.
ter: Jacob
6. Family
10,000 lbs.
I. Blahop,
I. Phoebe
2964, 14,320
butter
I. Homest
16,176 lbs.
butter: E.
2. Aggie
12,978 lbs.
fat, 560 lb
3. Frankford,
1. Della
the milk,
10,000 lbs.
4. Homest
27, 1534, 10
butter.
Ont.
5. Kate
16,176 lbs.
butter: F.
6. Edgemo
12,978 lbs.
H. McKenzie
One more
Totilla has
sord of 21.15

stand as equally well in the record of milk. Most of his mature animals are also in the Record of Performance. In this class during August Dairy, at two years, made 13,776 lbs. milk and 401.7 lbs. butter fat, the milk averaging nearly 4 per cent. She milked 265 days. Breta's record, one year and 237 days, at commencement of test, gave 7,653 lbs. milk and 262 lbs. butter fat. She milked 269 days, with an average per cent. of fat of 3.34. Another young animal, shown in the Three Spot, at two years, made 7,739 lbs. milk and 270 lbs. butter fat with a test of almost 4 per cent. fat. Another two-year-old, named Kay Beauty, in 239 days, and with an average fat test of 3.54, did much better with 10,540 lbs. milk and 364.9 of butter fat. The five-year-old cow, Eunice Jane Poach, has a record of 16,737 lbs. milk and 507.71 lbs. butter fat. She did this in 339 days and carried an average per cent. of fat of 3.5. It is a class of animals like these that our dairymen are looking for these days. They not only give a rich quality of milk, but are permanent producers for at least 10 months of the year. Such animals as these are the ones that make the profit on the year's work. Combining the ability to produce and with the breeding as shown in the catalogue, individuals from this herd will make particularly good foundation stock for our young breeders and others who wish to supplement their herds.

An Mr. Patterson is leaving the farm absolutely everything will be sold, the machinery and farm equipment of all kinds on the first day and the live stock on the following day, March 17th, at a convenience from Mr. Patterson's farm will meet all trains at Alford Junction on the last day of the sale.

SEMI-OFFICIAL TESTS OF HOLSTEIN-FRIESIAN COWS, FROM JAN. 15TH TO FEB. 15TH, 1914

Mature Class
L. Totilla Johanna Rno, 8025, 67: 22,159 lbs. milk, 777 lbs. fat, 971 lbs. 80 per cent butter. Hospital for Insane, Hamilton, Ont.

E. Meschilde Ruby Burke, 9421, 67: 1

The demand for Holsteins has been so good lately that many of the big breeders of Western Ontario are finding it difficult to get their animals for the big sales. It speaks well for the business even in the face of those fearful ones who think the business overdone. Most of the latter are those whose farm and herd have never been in price. They have never let people know, except incidentally, what they have for sale—hence they find it hard to sell, and them at only local prices.

An ad. to their dairy paper will help such as these. Try it tonight.

FARM AND DAIRY

17,600 lbs. milk, 541 lbs. fat, 676 lbs. butter. Hospital for Insane, Hamilton.
3. Queen Patti De Kol, Gordonia, 9462, 67: 14,696 lbs. milk, 469 lbs. fat, 672 lbs. butter. Wm. Watson, Pine Grove, Ont.
4. Helena Echo De Kol, 2256, 21: 12,283 lbs. milk, 385 lbs. fat, 461 lbs. butter. Wm. W. Whitton, Menie, Ont.

Four-Year-Old Class
1. Johanna De Kol Lena, 10339, 49: 2744; 16,717 lbs. milk, 569 lbs. fat, 711 lbs. butter.
2. Centre View Butter Gem, 10554, 49: 213; 15,530 lbs. milk, 422 lbs. fat, 602 lbs. butter. Jas. G. Currie, Ingersoll, Ont.
3. Deliah De Kol Johanna, 8643, 49: 1304; 15,049 lbs. milk, 439 lbs. fat, 587 lbs. butter. W. E. Watson, Pine Grove, Ont.
4. Maple Grove Irene, 12446, 49: 5d; 15,991 lbs. milk, 423 lbs. fat, 526 lbs. butter. Jacob Mough, Tavistock, Ont.
5. Hamilton B. Red, 10504, 49: 212d; 13,166 lbs. milk, 404 lbs. fat, 526 lbs. butter. P. J. Bishop, Duncan's Stn., B.C.

Three-Year-Old Class
1. Phoebe Fledge De Kol, 11750, 37: 209d; 14,329 lbs. milk, 474 lbs. fat, 592 lbs. butter. Henry H. Thomsen, Boharm, Sask.
Two-Year-Old Class
1. Homestead Susie Colantha, 14273, 37: 94d; 13,376 lbs. milk, 387 lbs. fat, 509 lbs. butter. E. Laidlaw & Sons, Aylmer, Ont.
2. Aggie Echo Netherland De Kol, 15938, 37: 24d; 13,017 lbs. milk, 447 lbs. fat, 569 lbs. butter. Geo. D. Wright, Frankford, Ont.
3. Bella Mercena, 15545, 37: 260d; 12,922 lbs. milk, 433 lbs. fat, 526 lbs. butter. Healdy Finch, Mapleton, Ont.
4. Homestead Sarah Colantha, 14273, 37: 153d; 10,359 lbs. milk, 333 lbs. fat, 476 lbs. butter. E. Laidlaw & Sons, Aylmer, Ont.
5. Kate Castleton De Boer, 16760, 37: 160d; 10,291 lbs. milk, 329 lbs. fat, 419 lbs. butter. F. B. Passmore, Bramford, Ont.
6. Edgemont Neil, 14315, 37: 225d; 8,960 lbs. milk, 239 lbs. fat, 398 lbs. butter. G. H. McKennie, Thornhill, Ont.

One more 20,000-lb. cow is found in Totilla Johanna Rno, with the fine record of 22,159 lbs. milk and 971 lbs. butter.
W. A. CLEMONS, Secretary.



**Sell Your Milk but--
Raise Your Calves as well**

Caldwell's Cream Substitute Calf-Meal
makes this possible and shows a profit of 100 per cent.

Every farmer and stockman *knows* that the sale and slaughter of practically newly born calves is a tremendous *waste*. Both would have raised or vealed up their calves long ago, but for the reason that this meant the *consuming of all the whole milk* produced. So they killed their calves and sold the milk as you have been doing for years and like you they have often wished for a substitute for whole milk, They have said so—your neighbors have said so and you have said so, too.

Hence Feed Manufacturers have been striving for years to find a substitute for whole milk as a Feed for raising and vealing up calves—

The market was as wide as the world and of course dozens of fake "Feeds" were rushed to the farmer and stockman—

But not a single one of these approached the nutritive qualities of whole milk as a feed for calves; until Caldwell's Cream Substitute Calf-Meal was placed on the market—a prepared feed so similar to whole milk that actual analysis shows it to contain almost the same nutriment and as such is guaranteed to the Canadian Government. Here's the certified analysis of the finished product:

- Protein 19% to 20%
- Fat 7% to 8%
- Carbo-hydrates 56%
- Fibre 5%

Caldwell's Cream Substitute Calf-Meal contains Linseed, Wheat, Oat, Corn, Locust Bean, Pea and Molasses Meal. We print the ingredients of our Calf-Meal as well as the guarantee on every tag.

Now you understand why we say—keep on selling your cream or whole milk, but raise or veal up your calves. Our Calf-Meal is sure to become as widely used and as much relied on as Caldwell's Famous Molasses Meal.

Tell your Feedman that you intend to raise your calves or veal them up. It will pay you handsomely to do so. Because it's cheaper to raise your dairy herd this way than to buy—and you might as well keep the calves you want to sell long enough to make something out of them.

With Caldwell's Cream Substitute Calf-Meal this is easy, economical and profitable.

N. B.—If your Dealer cannot supply you write to us, giving his name and address.

THE CALDWELL FEED CO., LTD., DUNDAS, ONT.

NORFOLK SALE

THE FIRST ANNUAL SALE

60 Head OF THE 60 Head

Norfolk Holstein-Friesian Breeders' Club

Will be held in

DR. BURT'S SALE STABLES

Simcoe, Ont., Tuesday, March 10, 1914

The cattle offered at this sale have been carefully selected with a view to winning your confidence. We believe it is the best all round lot for individuality, breeding and high official records that will be offered this season.

2-Year-Olds with 7-day records up to	22.07 lbs. butter
2-Year-Olds with 30-day records up to	29.63 lbs. butter (Canadian record)
3-Year-Olds with yearly records up to	19.61 lbs. milk
3-Year-Olds with yearly records up to	74.00 lbs. butter
Mature Cows with 7-day records up to	23.42 lbs. butter
Mature Cows with 14-day records up to	46.50 lbs. butter

Cattle will be sold subject to tuberculin test. No three teasers. No shy breeders.

SALE WILL COMMENCE AT ONE O'CLOCK SHARP

MOORE & DEAN, Auctioneers

Write for Catalogue to

J. Alex. Wallace, Secretary, Simcoe, Ont.

EDGEMONT STOCK FARM

COMPLETE DISPERSION SALE OF

43 HOLSTENS 43

AT

Thornhill, Wednesday March 11, 1914

ONE P.M. SHARP

As my farm is leased every animal will be Sold Without Reserve.

ALL MATURE COWS ARE IN R.O.P.

THREE AND FOUR YEAR OLD HEIFERS with Records up to 13,600 lbs. MILK.

TWO YEAR OLDS up to 11,200 lbs. milk. All records made on two milkings per day, and under farm conditions of care and feed.

YOUNG STOCK are nearly all sired by SIR LYONS HENGERVELD BEGIS (see catalogue.)

COME EARLY AND INSPECT THE HERD

If you are in the market for Good Breeding attend this Sale Catalogues give full particulars—Records and Breeding. Send for one.

J. H. PRENTICE
Auctioneer
TORONTO, ONT.

G. H. MCKENZIE
THORNHILL, ONT.

Stop 39 Metropolitan B. R.

TERMS OF SALE—Cash, or 8 months on Approved Notes.

Full Set (with the exception of Nos. 6 and 8) of H.F. Herd Books for Sale

S. LEMON'S CONSIGNMENT TO THE PATTERSON SALE

Editor, Farm and Dairy.—We are consigning to the H. E. Patterson sale eight females and two calves, including Boutje Poeh De Boer, 23 1/2 lbs. butter in seven days, 24.50 lbs. in 30 days, at two years 11 months old. Her dam has 23.77 in seven days and 28.33 in 30 days. Also Boutje Poeh De Kol, 19.06 in seven days at four years; her dam, 27.35 in seven days, 18.00 in 30 days. They are both grand-daughters of Boutje J. Q. Pieterse D. Kol, 30.76 lbs. milk and 977 lbs. of butter in one year at three years old. Another is Boutje Canary De Kol, a yearling daughter of Boutje Poeh De Kol, and also a niece of the above, by son of Nannet Topsy Clothide, 20.23 lbs. in seven days, 17.95 in 30 days; also the first 20-point cow in Canada. All the cows in this beifer's pedigree have tested over four per cent fat.

Topsy Canary De Boer is a two-year-old by the same sire as the above heifer, and her dam has 25.91 in seven days, 25.90 in 30 days. Her heifer calf, seven months old, is sired by a son of Spotted Lady De Kol, 27.25 in seven days, testing 4.93 per cent fat, and 106.40 in 30 days, testing 5.91 per cent fat, and 96.83 in 30 days, testing 4.78 per cent fat, and 96.83 in 30 days, testing 4.86 per cent fat. This heifer is a three-year-old with a record of 17.23 lbs. butter, seven days milk 460 lbs., sired by a son of Lulu's Grand Calamity Boutje Poeh is a richly-bred three-year-old, sired by a grandson of Boutje J. Q. Pieterse De Kol.—S. Lemon, Lynden.

TESTING AT MANOR FARM

Editor, Farm and Dairy.—We have been doing considerable official testing lately and made some very creditable records, the most notable of these being those of Hulda Wasmé of Manor. She freshened at two years six months six days, and produced 394.40 lbs. milk and 33.80 lbs. of butter, average test 4.22, in seven days and 1,673.00 lbs. of milk and 30.96 lbs. of butter in 30 days, average test 3.58. You will notice she has freshened seven days earlier she would have today and held the second highest record for 30 days as a junior two-year-old. This heifer is a very nice individual of medium size. Her half-sister, Manor's Hengerfeld De Kol, freshened at three years eight months 19 days and produced 359.30 lbs. of milk and 21.15 lbs. of butter, her average test being 4.36. Both these heifers are daughters of Korman's Hattatus, De Kol, who now has 15 R.O.M. daughters, several with two-year-old records from 15 to 30 lbs.

Others worthy of note are Cubana De Kol, Princess 2nd, at seven years eight months two days, milk 423.70 lbs., butter 24.52 lbs., average test 4.50; Calamity Houwite Pauline, at six years nine months 20 days, milk 464 lbs., butter 23.91 lbs., average test 4.12; Queen De Kol, at nine years one month 10 days, milk 449.20 lbs., butter 21.94 lbs., average test 3.21, 30 days, milk 1,907 lbs., butter 39.49 lbs., average test 3.76. You have no 30-lb. records to report up to date, but expect to be able to do so soon.

I would just like to say a word about our junior herd sire, King Segis Pontiao Poeh. He is now one year and one month old, and weighs considerably over 1,000 lbs. We now have 14 cows in calf to him, and will have as many more in the next few months—Jordan B. Gooderham, Bedford Park, Ont.

BANKS BUY HOLSTEIN COWS

Following the example of many Western bankers, the vice-president of the First National Bank of Detroit, Mich., advanced the money for a number of cattle to the East to purchase a carload of cattle to be distributed among the country farmers of lower Canada, in which Detroit is situated. These cattle are sold to farmers at cost, and their payments are collected for this purpose. It is expected that another carload will shortly be sent for.

Bankers in the West who have followed this practice, taking part of the payment from the cream checks at creamery, are given to those to whom the banks have sold cattle, funds, their payments are being usually promptly met.—W. A. Clemons, Secretary.

TESTING AT AVONDALE FARM

The season's testing opened with Spoekle Pietje, a daughter of Prince Hengerfeld Pietje, a 33-lb. bull, which has just been sold to the United States by Mr. Hardy for \$1,000. This heifer, after doing the rounds of the fair, gave 15.99 lbs. of butter as a junior two-year-old, and was immediately followed by another daughter of Prince Hengerfeld Pietje, named Beila Pauline Hengerfeld, which gave 19.78 lbs. of butter and 381 lbs. of milk in 7 days, and 770 lbs. of butter and 1,200 lbs. of milk in 30 days as a two-year-old, after having been on pasture until late in the fall. Brookland's Wasmé Korndyke, as a mature cow, made 29 1/2 lbs. and Fockie Pieterse 2nd Constant as a three-year-old made 23 lbs. of butter.

HOLSTENS

IDYLLWIDE HOLSTENS

FOR SALE—Three Bull Calves, sired by MAY ECHO'S PRINCE, whose dam is MAY ECHO, is Canadian Yearly Champion with 118 lbs. milk and 12 1/2 lbs. butter, in 7 days Champion at 12 years old. 75 lbs. and 31.34 lbs. butter; also Canadian Champion 8 months after calving. Also sired by FRANK SYLVIA BEETS BOSCH, whose daughter is Prince Hengerfeld's PAUL DE KOL—10 A.R.O. daughters; Homestead 10000 Bull, sired by R.O.M. daughters and Mercedes Yeake with 4 R.O.M. daughters and 4 proven sons.

Another dam is by Count Hengerfeld Johann whose grand sire, PIETERTJE HENGERVELD'S COIT DE KOL, has 25 proven sons and 95 A.R.O. daughters, including Susan Jewel Hengerfeld who with her daughter sold for \$3,000.

If you need something good, write me or come and see our stock. It is absolutely no better calves for sale.

JAS. SEYMOUR & SONS
R. R. No. 1, IDA, ONT.

LYNDEN HERD High-Testing

Bulls for sale, fit for service, with good backing. One sired by a son of Evergreen March, 29.46 lbs. milk and 10.10 lbs. butter in 1 year. Dam, Boutje Poeh De Boer, 23.77 in seven days, 28.33 in 30 days at 2 years 11 months. Dam 2nd, 25.77. Others nearly as good. All well bred and sound.

Write or come and see them.
S. LEMON — LYNDEN, ONT.

Registered Holsteins

FOR SALE
Young Cows and Heifers at bargain prices. De Kol, Pontiao and Butter Boy strains. Calves at foot or safe in calf. Parties wanting a bunch will get them at a bargain.
JACOB LEWIS, WOODHOUSE, ONT.

LYNDALE STOCK FARM

Grandsons of King of the Postage
Three Calves 9 mos. old, sired by King Pontiao Aris. Canada. One is from a 20th-year-old with a 28-lb. milk and 12 1/2 lbs. butter in 7 days by a 24 lb. yr. 4 yr. old. The other from an 18 lb. yr. old with 28 1/2 lbs. milk and 12 1/2 lbs. butter in 7 days.
BROWN BROS. — LYNDEN, ONT.

WOODLAND FARM HOLSTENS

Headed by Maplecrest De Kol, champion full brother to Banostina Belle De Kol, with champion yearly milk record of the season. Mercedes Led-son of Aaggie Mercedes—23 1/2 lbs. Dam—Netherlands Aaggie De Kol—champion R.O.P. 1909 with 2,666 lbs. of milk and 82 lbs. butter. Also another Bull, fit for service.
J. M. VANPATTER & SONS, AYLMER, ONT.

Anything in Holstein Females

From 1 week to 6 yrs. old. 75 head to choose from.
SPECIAL OFFER—We have raising 2 yrs. bred and built from 7 to 10 mos.
My herd bull is King Hengerfeld's 2nd, No. 6000, dam is Pearl Hengerfeld 3rd, first cow in Canada to make over 30 lbs. butter in 7 days.
Write me or come and see what I have that you think you would like to buy.
WM. HIGGINSON (NEMERAN, ONT.)

100 LBS. MILK ON EACH SIDE

A BROTHER TO MAY ECHO SYLVIA, 118 lbs. milk in 1 day, 34 lbs. butter in 7 days and 141 lbs. in 30 days.
His dam's dam (DE KOL PLUS) gave 106 lbs. milk in 1 day—22,300 lbs. in R.O.P.

DAM—A big strong vigorous 4 yr. old—when weifer 47%.

To be officially tested in spring.

This young bull (fit for service in spring) is a low-down, strong cheeper—about half a ton, and one milking up to 81 lbs. milk per day. Calf is out of officially tested cow, whose dam and her two previous years were at Toronto on separate occasions.

Write me about these.
B. R. LEAVERS — BLOOFIELD, ONT.

FIGHTING FOR FREEDOM



Against Combine Methods!



Sarnia Fence Wins

The Manitoba Grain Grower's Association The Saskatchewan Grain Grower's Association The United Farmers of Alberta and The Dominion Grange.

Have passed strong resolutions to give every assistance possible to the Sarnia Fence Company, and to purchase Sarnia Fence in preference to all others. We hope with their assistance to be successful in our fight with the large interests. It is no longer our fight, but yours as well. If you are not already a supporter of our Independent Policy, you should be. Start to-day; we need your assistance.

Four years ago we started marketing Sarnia Fence Direct to the Farmers of Canada, at prices so much lower than they had previously paid, that the great percentage of those who read our advertisements were skeptical as to its quality. They had been used to buying through their agents and dealers as much as 25 cents per rod more than we asked to pay Direct from our Factory. Freight Paid to their station. In four years we have gained the confidence of the Canadian Farmers and in return for our efforts, every farm organization in the Dominion of Canada have endorsed our policy and promised us every assistance. In return we wish every farmer in Canada to know that we are doing everything in our power to make our connection more close with them, so that it will be impossible for the combine to again force you to pay the high prices you have in the past. We ask your personal assistance, not only by the placing of your orders with us, but by the use of your personal influence you have with your neighbors in your locality. In return we guarantee to sell you the best dollar for dollar value in wire fence you have ever received.

By the Sarnia way of selling fence you have nothing to pay for but quality. You will receive a roll of Sarnia Fence that will give you such satisfaction that it will be remembered long after the price has been forgotten, and make you a permanent customer and strong supporter of our Direct Policy.

GUARANTEE: If you find for any reason that the fence received of us is not of the best hard steel wire, the best galvanizing, the most perfectly woven fence you ever purchased at any price, you are at liberty to return it to us. We will pay freight both ways and refund you your money.

WHICH WILL YOU BUY---SARNIA FENCE OR COMBINE FENCE?

WE SET THE PRICE. OTHERS DEVOTE THEIR ENERGY TO TRY TO MEET OUR PRICES.	PRICE Less than Carload in Ontario	PRICE Less than Carload in New Ont., Que., Mar. Provinces	PRICE Carload or over in New Ont., Que., Mar. Provinces	CASH WITH THE ORDER SAVES EXPENSE AND YOU GET THE BENEFIT OF THE SAVINGS IN THE PRICE.	PRICE Less than Carload in Ontario	PRICE Carload or over in New Ont., Que., Mar. Provinces	PRICE Carload or over in New Ont., Que., Mar. Provinces
5-40-0 HORSE AND CATTLE FENCE. Has 5 line wires, 40 in. high. 9 stays to the rod, all No. 9 Hard Steel wire, spacing 10, 16, 10, 10. Weight per rod, 6½ lbs. Price per rod, freight paid.....	18c	20c	19c	9.48 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 3, 4, 5, 6, 7, 8, 9. Weight per rod, 12 lbs. Price per rod, freight prepaid.....	31c	35c	34c
6-40-0 HORSE AND CATTLE FENCE. Has 6 line wires, 40 in. high. 9 stays to the rod, all No. 9 Hard Steel wire, spacing 7, 7, 8, 9, 9. Weight per rod, 7½ lbs. Price per rod, freight prepaid.....	21c	24c	23c	10-50 HORSE, CATTLE, SHEEP AND HOG FENCE. Has 10 line wires, 50 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 3, 3½, 3½, 4, 4, 5, 6, 6, 8, 8. Weight per rod, 15½ lbs. Price, per rod, freight prepaid.....	33c	37c	36c
7-40-0 HORSE, CATTLE AND SHEEP FENCE. Has 7 line wires, 40 in. high. 9 stays to the rod, all No. 9 Hard Steel wire, spacing 5, 6, 6, 7, 7½, 8½. Weight per rod, 8½ lbs. Price per rod, freight prepaid.....	23c	26c	25c	15-50-P STOCK AND POULTRY FENCE. Has 15 line wires, 50 in. high, 25 stays to the rod, top and bottom. No. 9, Filling 12 Hard Steel wire, spacing 1½, 1½, 1½, 1½, 2, 2, 2½, 3, 4, 5, 5, 6, 6, 7. Weight, 12 lbs. Price per rod, freight paid.....	37c	40c	39c
7-48-0 HORSE AND CATTLE FENCE. Has 7 line wires, 48 in. high. 9 stays to the rod, all No. 9 Hard Steel wire, spacing 5, 6, 7, 8, 10, 11. Weight per rod, 9 lbs. Price per rod, freight prepaid.....	23c	26c	25c	WALK GATE, 1½ x 48. Freight paid.....	\$2.50	\$2.75	\$2.50
8-40 GENERAL STOCK FENCE. Has 8 line wires, 40 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 3, 4, 5, 6, 7, 7, 8. Weight per rod, 10½ lbs. Price per rod, freight prepaid.....	28c	31c	30c	FARM GATE, 12 x 48. Freight prepaid.....	3.75	4.00	3.75
8-48 GENERAL STOCK FENCE. Has 8 line wires, 48 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 4, 5, 6, 7, 8, 7, 9. Weight per rod, 11 lbs. Price per rod, freight prepaid.....	29c	32c	31c	FARM GATE, 13 x 48. Freight paid.....	4.00	4.25	4.00
9-48-0 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 3, 4, 5, 6, 6, 8, 8, 9. Weight per rod, 11 lbs. Price per rod, freight prepaid.....	29c	32c	31c	FARM GATE, 14 x 48. Freight paid.....	4.25	4.50	4.25
				FARM GATE, 16 x 48. Freight paid.....	4.75	5.00	4.75
				STAPLES GALVANIZED, 1½ in. per box of 25 lbs. Freight paid.....	.75	.80	.75
				BRACE WIRE, No. 9 Soft, per coil 25 lbs. Freight paid.....	.75	.80	.75
				STRETCHER. All iron, top and bottom, draw very heavy tested chain, extra single wire stretcher and splicer, the best stretcher made at any price. Freight paid.....	7.50	8.00	7.50
				BARB WIRE PRICES ON APPLICATION			

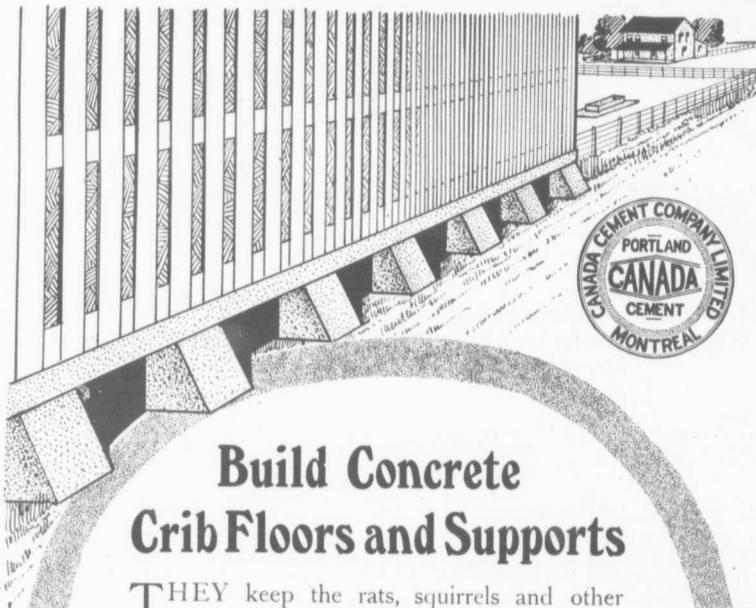
PLEASE NOTE---We prepay freight on orders for 300 pounds or over, on all railroads, with the exception of Electric Lines and Steamship Lines. Remember, these prices are not permanent and may be raised again shortly. Place your orders to-day. Remit by P. O. Order or Bank Money Order.

OUR POLICY---AN HONEST PRICE FOR AN HONEST FENCE

The Sarnia Fence Co., Limited, Sarnia, Ont.

Fence Put up in 20, 30, 40 Rod Rolls Only

Take this Price List up in a Conspicuous Place that your neighbors may see it.



Build Concrete Crib Floors and Supports

THEY keep the rats, squirrels and other rodents from carrying away your profits. Millions of dollars are lost to farmers each year through the ravages of rodents in cribs and granaries. Part of this loss is paid by every farmer whose crib floor isn't built of concrete.

Concrete crib floors and supports stop the waste because

They Protect Your Grain

Concrete is strong, durable and clean. It never wears out and needs practically no repairs. It is the cheapest of all materials for cribs and granaries.

Write for this free book "What the Farmer can do with Concrete." It tells all about the uses of concrete and will help every farmer to have better buildings and save money.

Farmer's Information Bureau

Canada Cement Company Limited

591 Herald Building, Montreal

