

Issued Each Week - Only One Dollar a Year

VOL. XXX.

NUMBER 9

FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

MARCH 2,

1911.



SPRAYING HAS BECOME A MOST ESSENTIAL PART OF PROFITABLE ORCHARD PRACTICE
Experiences of the past year have taught fruit growers as they never knew before that it pays to spray. Most remarkable results were secured from demonstration orchards that were put under approved orchard practice and sprayed. Hundreds of farmers learned last year that it was exceedingly profitable for them to spray even their small orchards numbering but a comparatively few trees. Will you profit from their experience and spray this year? If you do, spray thoroughly. Articles in this special issue of Farm and Dairy will tell you how. Mr. R. R. Sloan, Huron Co., Ont., whose spraying outfit is here shown, is one of many apple growers who make big profits from spraying, and who would counsel you to spray, spray, spray

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**BETTER FARMING AND
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THIRD ANNUAL
**ORCHARD AND GARDEN
NUMBER**

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Every Separator is "Weighed in the Balance" and most of them are "found wanting."
Not so with the "Simplex" Link Blade with the Self-Balancing Bowl.



The supply can is out of the way of the operator. The oil-drip-pan, between base and body, catches all drainage.

There are many pleasing features regarding the "Simplex." We have not space to mention them all but will indicate one or two.

Easy to Operate

Every dairyman of experience knows that the larger the hand Separator he can operate, the more profitable it is to him. What stood in the way of a wider use of the large capacity hand machine was the inability of any one to produce such machines that would be easy to operate.

A striking characteristic of the new model "Simplex" is that the 1100 pound size can be tuned by hand at the required speed with ease.

Send for literature giving full information concerning the "Simplex."

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WE WANT AGENTS IN A FEW UNREPRESENTED DISTRICTS

Organized Farmers

A farmers' organization that has some 500,000 members and hundreds of thousands of dollars at its disposal should offer some valuable object lessons to the farmers of Ontario and the East at this time when the need for better organization is generally recognized. The organization referred to is the National Grange of the United States. Interesting information about this organization was given to an editor of Farm and Dairy recently by N. P. Hull, the Master of the Michigan State Grange, and an officer of the National Grange, who has been in Ontario this month addressing the meetings of the Eastern and Western Ontario Dairy-men's Associations.

"The farmers of the United States," said Mr. Hull, "are fully alive to the fact that they must be organized and independent of both political parties if they are to properly safeguard their interests. Altogether some 500,000 farmers are united through the National Grange, which has over \$100,000 in funds either in cash or invested in good securities. In the State of Michigan alone, we have some 50,000 members of the Grange and a state fund of about \$45,000.

PROTECT THEIR INTERESTS

"As a result of our organization and of the funds at our disposal we are able to not only safeguard our interests in the national capital at Washington, but in our state legislatures as well. Recently, for instance, we felt that the educational authorities of our State were not doing as much as they should to promote rural education, so we sent a deputation of our members into Ohio and elsewhere to gather information on this subject.

"Our Grange is an excellent kindergarten for our young farmers. They learn to speak through taking part in discussions and reading papers at the local meetings of the local grange. Later they are encouraged to address meetings of the surrounding granges. The best are soon given opportunities to attend the meetings of their county as well as of the state grange. In this way our farmers are constantly developing men who are ready at all times to defend their cause both on the platform and in the press, as well as through our organization.

"Membership in the local Grange costs \$1.20 a year. Of this sum 19 cents is turned over to the State Grange and four cents to the National Grange. In this way our whole organization is well financed.

THE PRINCIPAL WORK

"While as an organization we devote considerable attention to matters that are political in nature, the great work we perform is really educational and social in character. The chief benefit of our work lies in the fact that it brings neighbors into closer contact and leads them to become better acquainted. Were it not for our educational and social features, the grange in the United States would not have lasted through all the years as it has.

"We have some farmers' clubs as well as some farmers' institutes, but we consider the grange is much the better and stronger organization. The chief defect of the farmers' clubs is that while it is easy to join them, it is also easy for men to drop out as members. Having no membership fee to speak of, they have no funds with which to carry on effective work. Instead of competing with the farmers' institutes, the grange really helps them, as we all the institute are those that the meetings of the grange are held where there are local granges, as the granges take hold and help to advertise the meetings.

"Through the Michigan State Grange, we conduct fire and life insurance companies. Insurance is given at very low rates. Farmers who desire to obtain the benefit of these rates have to be members of the grange. This adds strength to our organization. We have a state fair which each year writes around the country for wholesale prices on goods used by our members. At one time we saved three or four cents on our binder twine, but now the saving only amounts to about one-half a cent. On my fencing we saved two to four cents a rod. We have effected considerable savings on the purchase of coal. The state grange receives a commission of about 1 1/2 per cent on the goods purchased in this way by the local granges. It has received as much as \$6,000 a year in this way."

There are some 80 granges in Ontario, with about 2,000 members. It is time more were organized.

Veterinary Legislation

A bill, respecting Veterinary Surgeons, which has been given its first reading in the Ontario Legislature, affords protection to duly qualified veterinary surgeons. When this bill is finally passed the "quacks" and "fakirs," who now pose as veterinary surgeons will incur a penalty for wrongfully assuming the title of veterinary surgeons.

The clause in the Bill covering this point reads: Any person not possessing a diploma or proper certificate from The Ontario Veterinary College or a diploma or certificate as declared by the Lieutenant-Governor in Council to entitle the holders thereof to use the title of Veterinary Surgeon who appends to his name the pretentious title of veterinary surgeon, or any abbreviation or description implying or calculated to lead people to infer that he is, or is recognized by law as a veterinary surgeon, within the meaning of this Act, or that he possesses a diploma or certificate from any such college, shall incur a penalty not exceeding \$100 and not less than \$25.

Items of Interest

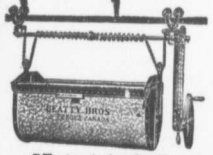
The Prince Edward Island Provincial Seed Fair will be held at Summerside on March 8, 9, and 10. Many thousands of bushels of grain will be disposed of at this fair, and farmers will have an excellent opportunity of getting good seed grain.

An agricultural motor competition will be made a feature of the Canadian Industrial Exhibition to be held at Winnipeg, July 5th to 10th, 1911. A copy of the rules and regulations governing this competition may be had on application to A. W. Bell, Winnipeg, Man.

The new appropriation in the estimates recently brought down in the Ontario Legislature provides for five additional High School Teachers and District Representatives. Official information as to where these men will be located has not yet been given. Many applications have been received in the department, and others are said to be on the way.

A short course in apiculture for students and ex-students who have taken apiculture lectures, but desire more practical and advanced scientific work, will be given at the Ontario Agricultural College, Guelph, May 1st to 15th. This course will put graduates in the way of becoming trained apiculture instructors. All instructors of apiculture and all beekeepers interested in the foul brood problem are asked to make it a point to be there for the Thursday conferences at least.

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FOR WEEK ENDING MARCH 2, 1911.

No. 9

HOW TO ENSURE A 90 PER CENT. SALEABLE APPLE CROP

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

Better Averages Than 90 Per Cent. Have Been Secured -- Work That Returns Over 300 Per Cent. on Labor Expended—Incidentally It Ensures an Annual Load of Apples.

I have been asked of me how I would go to work in order to secure annual crops of apples, ninety per cent. of which will grade



No. 1. When one reflects that, taken one year with another, the apple crop of Ontario grades probably less than 20 per cent. first class—and when one remembers, too, that a large percentage of our orchards bear full crops not more than two or three years out of five—this seems rather a large order. However, it is a good thing that we have our attention drawn to the possibilities of our business

so that we will have something to work for. The mark might be set at 100 per cent instead of 90 per cent. perfect.

The one point in this consideration on which I feel like placing special emphasis is one which has at no time received with us as much attention as it deserves. Many are doing all that can be done in cultivating, pruning, and spraying; even in the matter of fertilizing some seem to have gone as far as is possible. Yet we know, however, that orchard packing out 75 per cent. of strictly first class fruit have hitherto been very scarce in Ontario. Proper thinning would give us many crops running as high as 90 or even 95 per cent. perfect fruit.

GREAT RETURNS FOR LABOR

Such averages have been attained in other countries; they can be gotten here. And, furthermore, let me point out that no orchard operation will make a better return on the labor and capital invested than will thinning. Let us take a case in point. An average crop from a well cared for 10-acre orchard would be 800 barrels, including culls. Suppose No. 1 are worth \$3.00 a bbl.; No. 2, \$2.50; and culls, 15c. a bushel. Let us say this orchard will run 50 per cent. No. 1, 40 per cent. No. 2, and 10 per cent. culls. We have therefore:

800 Bbls.....	50	2	No. 1=400 Bbls. @ \$3.00=	\$1200
"	40	2	No. 2=320 " "	@ 2.50= 800
"	40	2	Culls=80 " "	@ .45c= 36
				800
				\$2036

Let us thin this orchard and find out if it pays:

800 Bbls.....	30	2	No. 1=240 Bbls. @ \$3.00=	\$720
"	40	2	No. 2= 80 Bbls. @ 2.50=	200
"	40	2	No Culls	
				240
				\$920

Value of Thinned Crop.....				\$240
Value of Unthinned Crop.....				\$300
Increased Value due to Thinning.....				\$24

As to the cost of doing the work, it may be said that five cents a barrel will cover most cases. Some growers in Ontario have kept with that figure, and in New York State and other districts this amount is said to represent the



A Tree with a Splendid Load, But What of it the Next Year?
This 11-year-old apple tree is loaded beyond the limit of safety. It would have paid to have thinned the fruit on the tree. Read Professor Crow's article adjoining, which gives to some exceedingly interesting information about thinning apples.

actual cost of doing the work. Double this amount of cost of you like and we have \$80.00 as the outside cost of thinning an 800 barrel crop. The sum of \$80.00 subtracted from \$324.00 leaves \$244.00 as the actual profit from thinning. Where can you invest to better advantage? *Three hundred per cent. on your money is "good enough for a farmer."*

I am firmly convinced that in many cases

these figures can be not only equalled but actually exceeded. Let our expert orchardists examine them, and if fault can be found I shall be pleased to see them discussed in the columns of Farm and Dairy.

RESULTS THAT COUNT

The best argument for thinning is the results. If Farm and Dairy readers could see some of the Pacific slope orchards, just before picking time, they would at once be convinced. I have walked through orchards in which it was practically impossible to find a cull apple—no worms, no scab, no small or poorly colored specimens—none but the best specimens are allowed to remain, and in many instances our standard of 90 per cent. perfect has been consistently exceeded. Some crops have been harvested that graded 95 and even 98 per cent. strictly first class.

INSURES ANNUAL CROPS

And then, too, there are other points to be considered. Not only is it possible to vastly improve the grade of fruit, but it is also possible by thinning to assist materially in securing annual crops. To thin properly, a definite number of apples should be decided upon for each tree, according to size and variety. A tree should not be allowed to bear more apples than it can bring to full size. If more than that number are left the average size is reduced without increasing the actual bulk of fruit, and in addition the energies of the tree are exhausted. It must be remembered that a tree aims, so to speak, at producing seeds, not fruit, and five barrels of small apples are produced at much greater cost to the tree than five barrels of large ones. If overbearing is prevented the tree can be expected to bear again the following season. As a matter of actual fact, the securing of annual crops is simply a matter of nourishing the tree properly and then preventing the exhaustion caused by overbearing.

PRUNING DOES NOT SUFFICE

Pruning is one method of thinning, and correct pruning aims at securing an even distribution of bearing wood entire tree. This frequently means the severe thinning out of small branches and improves the grade of fruit, first, by increasing the size through reducing the number, and second, by admitting light to all parts of the tree in sufficient quantity to cause proper coloring. But thinning can not stop with pruning. Even after a tree is correctly pruned there may be, and usually are, too many fruits,

and these require to be still further reduced in number.

It is customary to wait until after the June drop before thinning, but this is not at all necessary. If thinning is done early there will be no "June drop," as the tree will not find it necessary to shed part of its crop in order to bring the balance to maturity.

AN OPERATION LIKE UNTO PICKING

Thinning is essentially the same operation as picking. A tree should be worked over just as in picking, using ladders where necessary to reach upper branches. No fruits should be allowed to remain so close together that when full grown they will touch each other, nor should they be allowed to remain in such positions that they will later rub against a limb or twig. A heavily laden tree can afford to lose two-thirds of its crop for fully as many barrels will be secured at harvest time, and those remaining can be handled at picking and packing time at much reduced expense.

The saving in time of picking alone will pay the cost of thinning.

Many growers use a light, long-bladed snipper for thinning; this is to be recommended, as it is not easy to reduce a cluster of apples to one in the ordinary way without causing injury to the stem of the remaining apple. All clusters should be reduced to one fruit each and specimens should be spaced not less than four to six inches apart.

PULL OFF PLENTY

Very few men have the nerve to take off enough. Get your neighbor, or your worst enemy, to show you how, as they will be much more likely to remove a sufficient number than you will, at the first attempt at any rate. All small, deformed, or defective fruits should be removed, and the specimens left should be as uniform in size as possible. Ordinarily, it is not necessary to do other than simply drop the apples to the ground.

Thinning should start as soon as the apples reach the size of hickory nuts and may be continued as long as the fruit continues to grow, but the earlier the work can be done the better.

I find, Mr. Editor, that I am not able at this writing to say all I had in mind on this subject. I have so far failed to mention cultivation, fertilizing and spraying, but shall contribute further on this subject for your columns.

Grafting Fruit Trees

G. N. Gordon McKee, Annapolis Co., N.S.

In getting ready for the spring grafting, the first step to take is to consider the markets we expect our grafted fruit to go to. If we are preparing to ship our fruits to the Old Country, we should get an apple report from there and see what varieties lead in price and, if those varieties will do well in our locality, get them. If, on the other hand, we prefer a soft variety for the local market, get the kind most sought after in that market.

Having decided on the varieties, while the trees are in a dormant state, cut the scions, only cutting the growth of last year. After cutting, label them and roll in damp moss or bury in sand in the cellar and have them ready.

At any leisure time you can get the material and prepare your grafting wax. The following is as good as any: One pound of tallow, three pounds of beeswax, four pounds of resin. Melt the resin, and then add the others, and when ready to use warm and apply with a small brush.

When spring opens and the green is showing in the ends of the twigs, is a very good time to begin operations. Take a keen-edged knife and a fine-toothed saw, also an iron or hardwood wedge (a narrow one.) Cut off the limb,

and see that it is a healthy one, and insert the wedge.

I plan to have a number of grafts cut in advance and in cutting them leave two buds beside the one that is to go into the cleft as I find the root of the bud a valuable aid to growth. Make the graft wedge-shaped, leaving the outside slightly thicker so that the edges to unite will be the firmest. Then, having put in two (if the limb is large enough) carefully withdraw the wedge. After having done a dozen or more limbs, take your brush and apply the warm mixture. See that every part even the top of the graft is covered and in two or three years, if your operations have been successful you should find some fruit.

How to Prune the Orchard

John Spencer, St. Johns District, Que.

There is not one man in 10 that knows how to prune an orchard. The best time to prune is when the sap is done running, say, in June or the first of July, as the wood of the tree is then growing. Leave no stubs on the trunk of the trees. Keep the top open to let the sun in. Cut out all suckers and branches that spread over. [Note.—What is the opinion of others respecting best time to prune?—Editor.]

Some men cut off all the lower limbs. They claim that it gives a chance to get around better but they have a tall tree 20 feet or more from the ground. What are apples good for that fall on the ground from such trees? Perhaps they can grade them No. 1, I cannot.

Low trees are preferable to high. You can pick and spray to better advantage. Trees have different habits of growth, and cannot be pruned by rule.

Orchard Fertilizer.—There is no better fertilizer for the orchard than barn yard manure. I have used commercial fertilizers also. Lately I have been using wood ashes. The color of the fruit and the growth of the tree induced by wood ashes is remarkable. In the Niagara district they will pay 25 cents a bushel for good



A Great Mistake Was Made With These Trees

None of the trees in this orchard in Northumberland Co., were under 4 ft., 5 in., and most of them were 5 and 6 feet from the ground to the lowest branch. Our leading authorities advise heading apple trees not over 12 inches from the ground for the highest branch to leave the trunk. Some say head apple trees right at the ground. Farm and Dairy will have more to say about this subject in later issues.

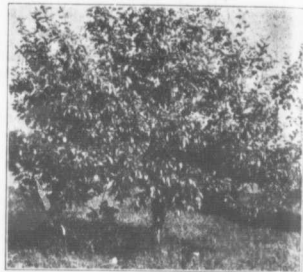
wood ashes. Potash supplied in the form of the muriate or the sulphate is much more expensive than when supplied as wood ashes.—J. W. Clark, Brant Co., Ont.

Planting Blackberries

John Ferguson, Kent Co., N.B.

To best understand blackberry culture, it must be known in the first place that the canes of blackberries are only biennial; that is, canes are produced one year, bear fruit the next, and then die. There is no such thing as two-year-old plants (as with trees and vines) when we refer to the stems, though the roots may remain alive and growing for several years. One-year-old plants are used for transplanting in all cases.

It is considered best to plant in rows and then restrict the plants to hills. The rows should be four or five feet apart according to the variety to be cultivated, and the plants two feet apart in the rows. Be sure that the plants have small fibrous



Might Have Been Headed Still Lower

This tree has been headed at about 2 ft., 6 in. It would have been better to have been headed even lower. In order to get low headed trees one must get one-year-old trees from the nursery and then head them at the distance from the ground desired.

roots and do not set them any deeper than they were before removal. Cut the canes of these plants down nearly to the surface of the soil, because if not cut they will take away from the strength of the root in forcing growth. The whole strength of the root is required the first season to produce canes, as upon this growth will depend the fruit of the next year.

The weeds should be kept down and the soil level, as the blackberry plant should never be banked up. There must be clean cultivation or the fruit-bearing canes and those for the following season will suffer from lack of moisture.

Planting Peach Trees

W. E. Corman, Wentworth Co., Ont.

When planting peach trees, see that the point where the bud has been inserted is below ground. In this locality, slant the trees well to the southwest. Cut off from 18 to 20 inches above the ground. Trim to one bud on the north and east sides and on the south and west sides leave two or three buds; in that way, you will have a chance to see which are the healthiest buds to form branches as the trees grow.

Each year trim out one-third and head back one-third to one-half. Remember to trim the heaviest on the north and east sides. Do not allow the trees to get a slant to the north and east, as it will allow the sun to beam on the trunk and in a short time it will ruin the trees. Do not allow your trees to get over 12 feet high. By keeping them low you will prevent them being split by the ice storms or being broken down by overloading.

Decide now what trees in your orchard grow undesirable fruit and determine to graft them over with some suitable variety. If you want a particular kind you have not got, secure some scions from someone who has.—J. A. Moore, Queens Co., P.E.I.

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THE CONTROL OF THE CODLING MOTH AND APPLE SCAB

L. Caesar, B.A., B.S.A., Agricultural College, Guelph

A 90% Perfect Crop of Apples May be Secured. No Need for Ontario Farmers to Lose the \$2,000,000 they do Annually as a Result of These Pests. Full Directions Given by a Practical and Scientific Man.

WITH the exception of where the fruit is stunted through the trees being nearly starved, nearly all the unsaleable apples in the average orchard are made so by the attacks of Apple Scab and Codling Moth. Hence the thorough control of these two pests is one of the chief problems that an apple grower must learn how to solve if he is to be a true success. That thorough control is possible and that, too, without very much trouble or expense, has been demonstrated so frequently that no one who has impartially studied the question can any longer doubt it. In every apple-growing state in the United States and in Ontario, every really progressive orchardist to-day is a thorough believer in the value of spraying for these two pests.

close indeed that no matter how carefully we tried we could not get any spray mixture inside them.

HABITS OF YOUNG LARVAE OR WORMS

We find that the Codling Moth worms do not enter the apples until after the calyxes have all closed, and we also find that 75% of the first brood of them enter at the calyx end. It stands to reason, therefore, that unless there is poison inside this part of the apple the worms will not be killed when they enter, and if the poison is once inside it will remain there and kill any entering at any time during the season.

WHEN TO SPRAY

The foregoing facts show that to get the poison into the calyx it will be necessary to begin to spray the trees immediately after the blossoms fall and while the calyx is still open as shown in fig. 1.

All the spraying must be done before the calyx closes, that is, inside of 10 days at the utmost or in somewhat less time than this if the weather is very hot.

The secret of controlling Codling Moth is therefore to see that every calyx is thoroughly coated with poison before it can close. If we do this so large a percentage of the first brood will be killed that there will be very little trouble from the second brood.

OUTFIT REQUIRED

For thorough spraying one should have as good an outfit as he can afford. A good up-to-date barrel pump is satisfactory for only about five acres of fairly large trees. For from five to 10 acres a double-acting pump

should be used. Ten acres of trees, 40 years of age are all that one should expect to be able to spray thoroughly with this outfit. For larger orchards it is usually desirable to get a good gasoline engine of about 2½ horse power. One of these with a good pump of large capacity, will spray about 25 acres of orchard composed of large trees.

A good nozzle is very important. The writer likes a nozzle of the "Friend" type. Several companies manufacture these. Two of them on the end of a Y give an excellent spray.

A small elbow between the nozzles and the spray rod is very necessary, for without it one cannot control the direction of the spray and send it directly into the calyx. Good pressure is also very helpful. One should always aim to have 100 lbs. pressure and if possible much higher, even up to 150 or 200 lbs. For tall trees a tower should be built on the spray wagon, otherwise the top of the tree will not be well sprayed and the fruit there will be wormy.

POISON TO USE

If we are using lime-sulphur, the only poison we can use with it is arsenate of lead; 10 lbs. to 40 gallons of the liquid is sufficient. If Bordeaux is used we may use either the same amount of arsenate of lead or ¼ lb. of Paris green.

THE NATURE OF APPLE SCAB

Apple scab is a tiny plant so small that we require a microscope to see what it looks like. This little plant does not manufacture its own food like ordinary plants, but lives as a parasite upon the apple leaves and fruit, depriving them of the nourishment that they need for their own proper development. Soon after becoming established

on the fruit or leaves, the Scab plant sends up little stalks, which bear tiny spores that act as seeds, and are carried by the wind from place to place, and, alighting on other leaves and fruit, start the disease there too if the weather conditions are favorable.

The disease winters over on the leaves on the

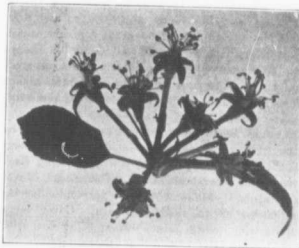


Fig. 1—Blossoms off, Calyxes Open, Ready to Spray

ground. A fresh crop of spores is produced in the spring from these dead leaves. About the time the blossoms are beginning to burst these spores are being spread throughout the orchard and if the weather is favorable, start the disease on the leaves and opening blossoms. The chief time, however, for the spread of the disease is shortly after the young fruit has set. Later in the season

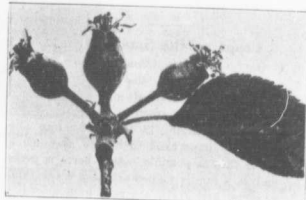


Fig. 2—Calyces Nearly Closed, Rather too Late to Spray as the weather becomes warmer and drier very few new infections occur except in very wet seasons.

MEANS OF CONTROL

If we can cover the leaves and fruit with some substance in which the spores cannot germinate, it stands to reason that we may hope to ward it off. Such a substance we have in Bordeaux mixture or lime-sulphur. We noted in the foregoing that the disease began to attack the foliage about the time the blossoms began to open, hence



Fig. 3—Too Late to Get Poison in

our first spraying should be just before the blossoms begin to burst. Failure to give this first application often results in the disease getting on the stem of young fruit and causing it to fall. We also stated that the most rapid and severe attack came soon after the young fruit had set; hence our second spraying must be just after the blossoms fall. Fortunately this is the time to spray for

(Concluded on page 8)



Spraying from Elevated Platform and Ground Giving a Thorough Application

An elevated platform on the spray wagon, is a necessity when trees of medium to large size are to be sprayed. This illustration was taken in the orchard of the Ontario Agricultural College at Guelph. Mr. Caesar, the author of the adjoining article, may be seen directing one of the rods from the front of the tower.

Moreover, it would be criminal on the part of those in responsible positions to advocate spraying unless they were genuinely convinced both by their own experience and that of others, that it would pay, and pay well.

CAUSE OF POOR RESULTS

Many persons in the province who are spraying are, it is true, getting poor results, results that possibly do not pay for the trouble and expense; but the reason for this could always be easily learned if one were present to see how and when the spraying was done. The fact is that the spraying in such cases is not done intelligently.

The proper time to spray is very important; for instance, if we do not spray at once after the blossoms fall for the Codling Moth, but leave it off for 10 days or so, we cannot hope to control it. In the same way, as we shall show, there are just two times in the year in ordinary seasons when we must spray to prevent Apple Scab. Again, careless spraying, which only partially covers the leaves and fruit, will not give good results. The reason for this will be apparent later.

THE CODLING MOTH

In order to control the Codling Moth successfully, we must know one or two of its habits, and also some of the changes that take place in the young forming apple. When a blossom falls off a young apple there are left five little green leaflets, which form what is called the calyx. At first these remain spread out like the blossom (fig. 1), but after a few days they begin to come together and close up (fig. 2), and by the end of a week or 10 days they are very close together (fig. 3), so

6 ft. It is added even one must and then desired.

than they of these soil, because the whole st season will depend

the soil never be following

Ont. the point ground. es above the north west sides you wish healthiness w. had back trim the Do not north and on the the trees. 12 feet prevent or being

rd grow ft them want a re some Moore,

Pruning the Old Apple Orchard

J. C. Harris, Oxford Co., Ont.

In commencing to prune a neglected apple tree, one should take at least two years for the operation. The operator should always bear in mind a few general principles. 1. Heavy pruning is a severe shock to a tree and should not be carried to excess in any one season. 2. Fruit grown on very high trees is expensive and difficult to spray, thin, and harvest; for this reason the work generally is not well done. 3. Leave fruit spurs three or four inches apart over your tree inside and out. 4. Sunshine makes color; trim to have every apple share the sun's rays.

I would commence pruning an old tree by cutting cut the cross limbs inside the tree. Next lower the highest portions, always cutting back to where another limb starts. Cut close. Never leave stubs. Make cuts as perpendicular as possible so as to shed the rain. Cover large wounds with white paint. Then commence with a ladder on the outside of the tree thinning out the branches to allow the sunlight access to all parts of the tree. Next thin out the fruit spurs on the inside where they are too thick, avoiding always having any bare limbs.

Every tree should be gone over annually keeping the head symmetrical and open. An orchard kept in this shape will soon become a source of pleasure and profit to its owner. A well cared for plantation of the best varieties should give a net profit of \$100.00 to \$175.00 an acre per annum.

Crops on the Small Farm

W. J. L. Hamilton, Nanaimo Co., B.C.

Around Victoria, B.C., the land is very valuable, much of it is divided into small plots of say 10 acres. As the growing of small fruits is very profitable, bringing in \$300 to \$400 an acre, it is naturally important to devote as much of the plot to this as possible. As a horse is necessary, and as a family man must have a cow, and, as hay, roots, and grain are very high priced, it is imperative that some of the 10 acres be devoted to raising feed for their animals. Hence it is of importance to keep them on the smallest possible acreage.

To do this the animals must be stall fed. Alfalfa hay is about equivalent to bran in feeding value, and is a great milk producer, whilst green alfalfa, four cuttings of which can be obtained a year, is a most nutritious and satisfactory food material. Hence an acre of alfalfa once it comes into bearing is almost a necessity. Moreover it lasts a lifetime. Peas and oats, a half rod of which is a good day's feed for a cow is also most satisfactory, provided the crop is sown weekly up to April, which will then be giving food during end of June and all July. Just enough land for a week's feed, three and a half rods per herd, should be sown each week. Red clover can be sown with this crop of peas and oats giving next year and the following, good crops of green feed and hay. When this clover is plowed under, roots can be grown on the ground, which will then be in splendid condition to set out strawberries. Hog millet, which does well here may be sown as the peas and oats are cut, if one chooses. It proves to be an excellent feed.

For early feed winter rye can be sown in the fall on any vacant plots; since this is about the earliest green feed available in the spring, being a week before fall wheat.

Sugar corn, or early varieties of field corn give heavy crops; these can be fed along with peas and oats, so that these are considerably stretched, requiring a less acreage, and at the same time giving a better ration.

With four cuttings of alfalfa, with rye for

early feed, peas, oats and corn up to August, with ensilage made from corn, clover, peas and oats, and with a plot of roots the feed bill for the stock will be greatly reduced, and, deducting plots for buildings and gardens, six acres will still be available for small fruits, which will be quite as much as the owner, helped by his family, can manage; this area should bring him in an income of about \$1,500 a year if he is close enough to his market to deliver his fruit daily without wasting too much time.

The most profitable small fruits to grow here are strawberries, raspberries, loganberries, and blackberries, which give an extended season, and so spread the labor of picking over a long period, an important point where pickers are scarce and wages high.

Pointers on Strawberry Culture

W. C. Horne, Peel Co., Ont.

The soil for strawberries should be highly fertilized. I prefer manuring heavily in the fall, and plowing rather deeply. In the early spring we use the spring tooth cultivator, setting it to run deeply two or three times before planting. By so doing we have our soil thoroughly mixed with the plant food ready to give the plants a start.

The best time for planting is from the middle of April to the first week in May. We never set our rows closer than 3½ feet wide. It is better if they are four feet apart, and the plants from 20 inches to two feet in the rows. After the plants have been planted a week or so we cultivate and hoe thoroughly. It is important to thoroughly hoe and cultivate before the plants begin to run. We spare as far as possible the first new plants from the runners as very often they are the only ones to fully develop for the bearing of fruit the next season.

SELECT THE PLANTS

It is important to set selected plants only. We then get a better catch and a better row. We do not allow the plants to set too thickly in the row. There should be from three to four inches between each plant if we would secure the best results. We don't allow our rows to exceed two feet in width.

There are many varieties of good strawberries. Some are better adapted to certain soils than others. The Williams, Warfield, Sample and Glen



"Some Pumpkins"

For milk cows, hogs and sheep, pumpkins have considerable feeding value. When grown in the corn field, however, they interfere with both cultivation and harvesting of the corn crop. They ought to be grown as a separate crop on land by themselves.

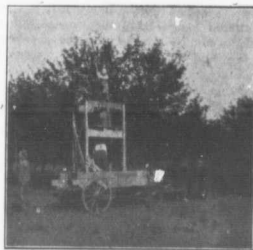
Many all do well on a moist soil. The Warfield is perhaps the best canning variety and requires a moist soil to develop properly. The other three do as well as any that I know of on the lighter and dry soils, as does also the Beder-wood. The Warfield and Sample are pistillate varieties.

Money in Early Apples

R. C. Fowler, Halton Co., Ont.

For the past few years, early apples, such as Yellow Transparent, Astrachan, and Duchesse, have proved fairly profitable. There is a good demand for them in the markets of the west, and also in our own Ontario markets. The Old Country market calls for the Duchesse.

Our early varieties last season netted us about 25¢ a standard basket for No. 1's and No. 2's, after paying commission and transportation charges. Considering the probable increase in the demand in the future, consequent on the increase in population of the cities of our older provinces, and the



Spraying in a Demonstration Orchard

Note the elevated platform. This is a home made affair and was nailed together by a farmer who had never seen one before. An elevated platform is necessary if one would spray his orchard most effectively. Photo snapped by an editor of Farm and Dairy in the demonstration orchard on W. Hamilton's farm, near Collingwood, Ont.

marvellous growth of the west, the planting of the best varieties of early apples should prove a very profitable branch of fruit growing.

One factor that contributes largely to the profit derived from the growing of early apples, is their early and continued productiveness.

Grow Pumpkins as a Specialty Crop

N. C. Campbell, Brant Co., Ont.

Pumpkins ought to be grown on every farm. Every boy,—yes and most men,—and we shall not leave out the women, like pumpkin pie. Hence a few pumpkins can readily be disposed of for making pies. Any that are left will be relished by cattle and swine.

Cattle, once they learn to appreciate them, are very fond of pumpkins. Pigs relish them too and on that account pumpkins may be reckoned as of considerable value for fall feeding.

It is customary on most farms where pumpkins are grown to plant the seed with corn or with potatoes. It cannot be said that this practise is altogether advisable, since, as any observant one can testify, the rows of corn or of potatoes in which the pumpkins are planted do not yield nearly so well as where the pumpkins have not shared the ground. We always grow a few pumpkins but we plant them on a plot of ground by themselves.

Varieties of Raspberry

Charles F. Sprott, New Westminster Dist., B.C.

When selecting varieties of raspberries to plant the grower must consider climate and location. I would strongly recommend anyone to visit existing plantations and plant such varieties as are in that locality making money for the owners. Later on, if one sees fit and with experience gained, some of the new or untried varieties can be tested.

Personally I favor for this district of British Columbia, the Red Antwerp. It far exceeds in productiveness, thriftiness and good shipping qualities any other variety I have tried. Other good varieties are the Loudon, Cuthbert, Marlboro and Golden Queen. The latter is yellow.

LIME SULPHUR SPRAY - ITS USES—HOW TO MAKE IT

H. L. Fulmer, Demonstrator in Chemistry, O.A.C., Guelph

A Wash That Meets all Requirements and Can be Made at Home or Purchased in the Commercial Form. Arsenicals May be Mixed With it to Control Insect Pests.

FOR many years "Lime-Sulphur Wash" has been used for spraying purposes; originally to control the San Jose Scale, but now for combatting many other insects as well, and also several varieties of fungous diseases. Its field of usefulness is still gradually enlarging year by year and before long we may find it occupying the position of what is known as a "cure-all." A universal remedy would be a valuable find and indeed the lime-sulphur wash, combined with some poisonous material, such as lead arsenate, practically now meets this requirement.

There are three well-defined lime-sulphur washes: (1) Home-boiled; (2) Self-boiled; (3) Concentrated; (a) Commercial; (b) Home-made.

HOME-BOILED WASH

This is a winter wash and is used in the spring before the leaves and blossoms appear. It is made as follows: 20 gallons of water are placed in a barrel and steam from an engine or boiler run into it through an iron pipe reaching almost to the bottom of the barrel. While the water is heating, 20 lbs. of fresh stone lime and 15 lbs. of flour or flowers of sulphur are weighed out and dumped into the barrel with the water. The mixture will now soon commence to boil. The steam is allowed to pass through fast enough to keep up a strong and vigorous boiling, and this continued for an hour. At the end of this time the mixture will be sufficiently cooked, and water can be added enough to make the volume up to 40 gallons. The mixture, sediment and all, is now strained through a brass wire strainer with 30 to 40 meshes to the inch, into the spray tank, and is ready to apply at once. The straining is to remove any large lumps of lime which might be present, and which would probably clog the pump and nozzle if left in.

OTHER METHODS OF BOILING

For those who have not an available supply of steam on hand for cooking the wash, the "pot" or "pan" method of boiling can be used wherein the directions of procedure are exactly the same, except that the boiling is done by direct heat. A suitable form of pot is the ordinary potash kettle used for soap-making; and of the pan a good strong wooden box shaped like a sap evaporator and with the bottom covered with sheet iron. The pan can be supported on a brick or stone arch in the ordinary way.

The quantity of wash made at a time will depend on the capacity of the vessel in which the boiling is done, and can be made in large or small bulk as desired, so long as the proportion between the lime, sulphur and water is kept the same.

SELF-BOILED WASH

This wash is especially adapted to summer spraying. It is of such a nature that it can be applied to trees and shrubs in foliage without causing any destruction of the latter. To make this wash, a lime of first class quality must be used, and it must be freshly burnt so that it will slake very rapidly and vigorously. Freshly burnt Beachville lime is excellent for this purpose. It is made as follows:

Place 32 lbs. of lime in a barrel and pour on enough water to almost cover it. As soon as slaking begins add 32 lbs. of sulphur (sifted flowers of sulphur to get rid of lumps). Stir the mixture constantly while slaking and add more water to form a thick paste, and then gradually a thin paste; six or eight gallons are usually required for the whole thing. The slaking will cause several minutes' boiling. As soon as slaking is over add water to cool, strain into the spray tank, and then add enough water to make the whole up to 160 gallons. Smaller quantities can be made to suit conditions.

CONCENTRATED WASH

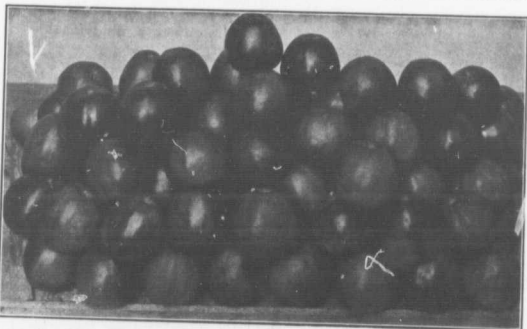
This form of the wash is very strong and must be diluted with a great deal of water before spray-

ing in another article in some subsequent issue of Farm and Dairy, in the Horticultural Department.

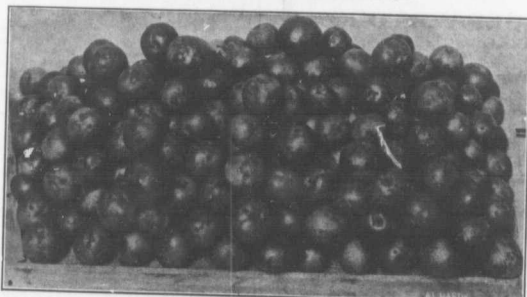
ADDITION OF LIME TO DILUTED CONCENTRATE

Those concentrates that are bought without the sediment present in them do not mark the tree sufficiently when sprayed, and consequently some orchardists add slaked lime to them to overcome this. This practice is not objectionable if the lime is not added until after dilution and only just before spraying. About four lbs. of good stone lime are slaked and strained, and this then added to the lime in the spray tank, and agitated in order to mix it in well. This is the quantity we use for each 40 gallons of spray. Besides acting as a marker, this lime also prevents the wash from dripping so much from the tree and also adds sticking quality.

In order to do away with a separate and additional spraying operation for applying poison for eating insects, such as the codling moth, an arsenical is often added to the lime-sulphur spray and applied along with it in the same operation. This is usually quite a safe practice, but lead arsenate is the only arsenical which is recommended for this purpose. The quantity of the arsenate used varies, but usually averages about four lbs. to every 40 gallons of wash. It is worked up into a thin paste with water and then added to the tank and agitated until well mixed with the spray. Paris green and arsenite of calcium have been used in this connection, but the former decomposes the lime-sulphur wash a great deal and weakens it, and the use of the latter has often caused much damage to foliage, hence the use of both is condemned.



Northern Spy Apples taken from lower limbs in Ray Clark's Orchard, Woodville, N.S., having been carefully sprayed with Niagara Lime-Sulphur



Apples taken from the tops of the same trees, being too high to reach with the spray

ing. It can, by adding the suitable quantity of water, be made into either a summer or winter wash. The advantage of this wash is that it is very convenient since it can be stored away in any quantity desirable at any time of the year, and when any spraying is to be done all that is necessary to do so is to dip some of the concentrate into cold water, and it is ready to spray.

This wash can be bought (Commercial), or it can be made at home (Home-made), at less expense.

To make the home-made concentrate, proceed in the same way as in making the home-boiled, except that larger quantities of lime and sulphur are used, and further that the lime must be of good quality, like Beachville, and must be freshly burnt. Further particulars can be found on page 25, Bulletin 177, Ontario Department of Agriculture, for making this wash. How to dilute the concentrate will be dealt with.

Tomatoes on a Trellis

J. W. Clark, Brant Co., Ont.

Last year for the first time I grew my tomatoes on a trellis, and intend to keep up this practice. More tomatoes and better tomatoes can be grown on the trellis than where the plants are allowed to straggle around on the ground. They are easier to cultivate, the fruit ripens better and is cleaner. It is not necessary to wipe off the dust before selling.

The trellis which I have used consists of a heavy post every 45 feet, and light sticks for supports every 15 feet, with fencing wire stretched between.

The plants are tied to these wires with binder twine. The tomato plant is trimmed down to all but two or three stalks. The labor of trellising the plants is more than made up for by the saving in hand hoeing which is necessary where the plants are allowed to straggle. Then we have extra fruit, better fruit and consequently larger returns.

Our recipe for grafting wax is as follows: Four parts by weight of resin, two parts by weight of beeswax, one part pure linseed oil, either raw or boiled.—Prof. J. W. Crow, O.A.C., Guelph, Ont.

The soil for blackberries must be well drained, and it should be a strong loam.

Asparagus, that daintiest of spring vegetables, is as easily grown in Saskatchewan as is the indispensable rhubarb.

Good Farming Special

The "Better Farming Special," the demonstration train which will be available to the farmers of the southwestern portion of Ontario, along the Michigan Central Railroad, will on the second week of its tour, touch the following points, and will reach each place at the time indicated. Instruction will begin at once, lasting from an hour and a half to two hours.

March 7th—Kingsmill, 8.30 a.m.; Springfield, 10.25 a.m.; Brownsville, 1 p.m.; Tillsonburg, 3 p.m.
 March 8th—Hawtreys, 8.30 a.m.; Wyndham, 10.25 a.m.; Waterford, 1 p.m.; Villa Nova, 3 p.m.
 March 9th—Hagersville, 8.30 a.m.; Cayuga, 10.25 a.m.; Canfield, 1 p.m.; Attercliffe, 3 p.m.
 March 10th—Perry, 8.30 a.m.; Welland, 10.25 a.m.; S. D. Davids, 1 p.m.; Niagara-on-the-Lake, 3 p.m.



BRUCE'S BIG FOUR FIELD ROOT SPECIALTIES

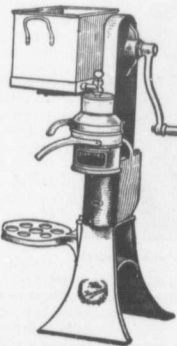
BRUCE'S GIANT WHITE FEEDING BEET—The most valuable field root on the market, contains the rich qualities of the Sugar Beet with the long keeping, large size and heavy cropping qualities of the long footed, 1 lb. 30c, 4 lbs. \$1.10, postpaid.
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BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL—A very close second to our Giant White Feeding Beet, and equally easy to harvest. 1 lb. 30c, 4 lbs. \$1.10, postpaid.
BRUCE'S NEW CENTURY SWEDEN TURNIP—The best shipping variety, as well as the best for cooking; handsome shape, uniform growth, purple top. 1 lb. 30c, 4 lbs. 30c, 4 lbs. \$1.40, postpaid.

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FARM MANAGEMENT

Soil Fertility Lost in Dairying

On page 6 of Farm and Dairy last week a table showing losses of the various farming ingredients in connection with dairy farming was inadvertently omitted, and is herewith reproduced this week. In the production of 1,000 lbs. of milk from which the cream is sold, the following table shows the amount of fertilizer used, how much is lost, how much may be returned to the soil, and how much fertilizer will have to be purchased or obtained by legumes:

Elements	In Milk and Returned to Soil by Milk		Returned to Soil by Manure	Total Returned to Soil	Total Loss	Fertilizer lost
	Lbs.	milks				
Nitrogen	21.5	1.5	9.3	12.0	9.3	\$1.38
Phosphoric acid	9	1.9	1.2	11.2	7.8	-.31
Potash	18.0	.87	9.8	10.7	7.5	-.36

Improving a Sandy Field

Please suggest the best method of making a sandy hill. It is a small field on top of a hill. Will alfalfa grow where clover has been, with a shallop?—H.H.W., Richmond Co., Que.

1. On such a field as described good results might be confidently expected from the following line of treatment: Between now and May 15th apply 15 tons farmyard manure an acre. Plow three to four inches deep when the weather is wet and later than May 25th if possible. Work the soil till a good firm seed bed is secured. Then sow White Cap Yellow Dent or Leaming corn in hills three and a half or four feet apart each way. Let cattle feed clean during summer. Let cattle lie in when the corn is harvested. Rip up corn stubble with stiff tooth cultivator or disc harrow in the fall. Harrow well and in next spring (1912) sow oats, three bus. an acre and at same time sow 12 lbs. red clover, two lbs. alsike, three lbs. alfalfa and six lbs. timothy an acre. Mix the grass and clover seed thoroughly, divide into two equal portions, sow one half lengthwise, other half crosswise, covering the whole field at each seeding. Harrow lightly after seeding and roll firmly, going twice over the field with the roller if the land is at all loose.

The oats should be cut on the fresh side and the cattle kept off all fall. Next year (1913) pasture or cut clover hay and in 1914 sow to corn again. Such treatment will make the sandy knoll the best land on the farm in a very few years.

2. Alfalfa may grow where clover has been but not necessarily or as a consequence of clover having been grown there. The method of sowing two or three lbs. of alfalfa with the clover and grass for a few years is the best plan for inoculating soil.—J.H.G.

Sowing Rape—Quack Grass

Please give me information on the time to sow and the cultivation of rape for pasture. Can rape be grown with nurse crop or is it better without?
 2. What is the best method to kill quack grass on sandy soil.—S.J., Haliburton Co., Ont.

Rape can be sown with a nurse crop and used as pasture after the nurse crop has been harvested. Barley, wheat or oats might be used and are advisable in the order given. I might say however, that the chances of a good catch of rape with any one of the above nurse crops are not very good, unless the season is very favorable and the land in particularly good shape. Under average conditions better results will be obtained by acting as follows: Immediately after harvest rip up the stubble land with a spring tooth or stiff tooth cultivator, smooth harrow, sow rape 10 lbs. an acre broadcast, harrow very lightly and

then roll. The rape might also be sown in rows from 18 inches to two feet apart and be expected to give just as good if not better results. When sown in rows about five lbs. of quack grass will be sufficient.

2. The best way to rid a sandy soil of quack grass is to plow in hot dry weather and rip up with a spring tooth harrow until all roots are exposed. Another plan is to plow rather shallow, say four or five inches deep, in early June; cultivate until a nice rain happens along. When the soil is in the best shape for seed germination, sow buckwheat, a bushel and a half an acre, harrow well after seeding and leave the buckwheat to grow until in full flower, when it should be plowed down about five inches deep, thor-

oughly worked and reworked at intervals to keep any surviving quack grass roots in check.

The sandy well manured, plowed with a shallop, worked, and sown to corn in hills four feet apart each way will give a good crop of corn and can be kept free of the grass with a reasonable amount of work by using a good corn cultivator.—J.H.G.

I. F. Metcalf, B.S.A., who for three years has made such a pronounced success of his work as District Representative of the Ontario Department of Agriculture for Simcoe County, has resigned the office to accept a position with a Toronto company that is leasing orchards throughout the province for terms of from five to ten years. The firm has already secured a number of orchards in Simcoe county, and these, with others in different parts of Ontario, will be under Mr. Metcalf's direction.

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PURE BRED FOWLS GIVEN AWAY FREE in return for new yearly subscriptions to Farm and Dairy. A club of four new subscribers will bring you a pair of pure bred standard fowls. Write Circulation Manager, Farm and Dairy, Peterboro, Ont.

FOR SALE—Iron Pipe, Pulleys, Beltline, Balls, Chain Wire Fencing, Iron Plates, etc., all sizes, very cheap. Send for list, stating what you want. The Imperial Waste and Metal Co., Dept. F.D. Queen Street, Montreal.

THERE IS AN ENORMOUS DEMAND for Dairy and Stock farms products in the South. The U.S. Government in its Agricultural Year Book says: "While the Southern Dairyman will have some difficulties that are not found in the Northern sections he also has many advantages over the Northern Dairyman in milder climate, cheaper land, more greater variety forage crops and stock markets." We have a large list of farms for sale in the rich Piedmont section for \$10.00 to \$75.00 per acre, foot of mountains, no malaria, out door work the year round. Death rate in Greenville is 1 to 100. Write for descriptive booklet. Goldsmith & Agnew, Greenville, South Carolina, U.S.A.

The Feeders' Corner

The Feeders' Corner is for the use of our subscribers. Any interested are invited to ask questions, or send items of interest. All questions will receive prompt attention.

Feed for a Sow with Litter

Will you give me a ration to feed a sow with young pigs from the following feed stuffs: oats, oats and barley mixed, mangels or sugar beets, alfalfa, corn in meal, and after the factory closes, separator milk—E.K., Ontario Co., Ont. The feed stuffs mentioned are for the most part well suited for feeding brood sows carrying litters. I would suggest the following as being likely to give satisfaction: Meal mixture, oats, two parts; barley, one part; say three pounds a day. Mangels or sugar beets, six to eight lbs. a day. In case sugar beets were fed it would be better to slice or pulp the roots. This is not necessary with mangels. Feed as much alfalfa hay as she will eat. Give an ear or two of corn a day. Put the corn where the little chaps can get a chance at it. Skim milk or whey uniformly sour, or else uniformly sweet can be given in any quantity she wants to drink.—J.H.G.

A Ration for Heifer Calves

What is the best method of feeding gray Holstein calves about eight and a half months old. I intend to have them milking at about two years old. I have plenty of good clover hay and corn cured in shock. How would a mixture of three parts bran and one each of oats and alfalfa do? How much should be fed per day?—K., Frontenac Co., Ont. Heifers of the age and breeding mentioned are expected to do well on a ration prepared as follows: The corn cured in shock should be run through a feed cutter, enough to last a week being cut each time. If corn is very dry it might do to cut enough for two weeks at a time. Such a quantity should be cut in any case as will not spoil before being all used. This, with cut straw mixed therewith, say 20 lbs. oat straw to each 200 lbs. corn forage, should be fed night and morning in whatever quantity the heifers will eat clean and look for more. A good plan

would be to pile each day enough of the mixture of cut corn forage and oat straw or oat chaff to do the next day's feeding. On this pile enough water should be scattered to set up fermentation or heating by the next day. On the portion of the mixture of corn forage and straw given each animal should be scattered, when in the manger, the meal it is desired to feed the animal. The whole mass might then be given a slight stirring to mix meal and roughage.

The meal mixture suggested is a good one and should, to give best results with the roughage available, be fed at the rate of about one pound a heifer night and morning. Beginning about three months before calving the meal should be increased fairly rapidly until the heifer is getting, at about a month before, say 6 lbs. a day of a mixture similar to that described.—J. H. G.

Feeding Calves without Skim Milk

M. H. Gardiner, Delevan, Wis. A New York breeder asks if it is not just as well for him, in feeding his calves, to add warm water to whole milk as it would be to feed skim milk. Many breeders are so situated that, disposing of their milk for cheese-making, shipping, or to condenseries, they have no skim milk and must feed whole milk. The aim of such breeders is to supplement the milk with cheaper foods, so as to have as much milk as possible to sell. There are those who have so well learned how to do this that they are able to raise a fine calf, using but comparatively a small amount of milk.

Holstein-Friesian calves if worth raising at all are too valuable to stunt in growth by stinting their supply of milk below what they absolutely require for best development. No hard and fast rule can be laid down; as calves differ in their individual requirements, some taking to the supplemental feeds better than others. Those getting the best results feed the calf on whole milk in the usual way till it is four weeks old and well started. Then instead of gradually replacing the whole milk

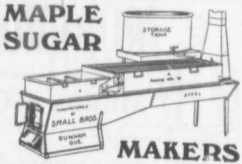
with skim milk they continue the whole milk without increasing its quantity, gradually adding warm water as the calf requires more water than is found in the milk, and supplying its increasing food requirements with supplemental feeds.

SOLIDS NECESSARY

No one should imagine, however, that water alone can in any way take the place of skim milk, though it may take the place of the water found in the skim milk. Our semi-official records are showing that average Holstein-Friesian milk contains about 12 per cent. of total solids, of which 3.45 per cent. is fat, 8.55 per cent. solids other than fat; and as but a small portion of the solids not fat are skimmed off with the cream, we may for all practical purposes assume that Holstein-Friesian skim milk contains nine per cent. of solids not fat, or nine pounds in every 100 lbs. of skim milk. A calf two months old needs not less than 20 lbs. of skim milk a day, which will contain 1.8 lbs. of solids other than fat; but if this calf gets but 10 lbs. of whole milk diluted with 10 lbs. water it gets but .85 pounds of those solids. In calf raising, it has been found easier to supply the place of the fat in the milk than that of the solids not fat; but with an average of not less than 10 lbs. of whole milk per day for the first 150 days of a Holstein-Friesian calf's life as a working basis, a skilled feeder can raise very fine calves without skim milk.

Won Calf in less than a Week

Recently Farm and Dairy offered a pure bred Hosten calf for a club of 45 new subscribers at \$1.00 each. Mr. H. V. Hughes of Lisgar, Que., was less than a week securing such a club, and Farm and Dairy recently shipped to him a pure bred Holstein Bull Calf, which was bred by Gordon H. Manhard, of Manhard, Ont. Mr. Hughes writes Farm and Dairy, "The thoroughbred Holstein calf which I received from you for securing a club of 45 new subscribers, has arrived O.K. and I am well satisfied with him in every respect. I am well pleased and wish Farm and Dairy every success."



MAPLE SUGAR MAKERS
The Lightning Evaporator is not only the fastest one made in the world, but it holds more prizes, medals and diplomas for quality of syrup it makes than all the other makes put together. We have the documents to prove this. Awards for season of 1910 were: First on sugar and syrup at the Great Eastern Exhibition at Sherbrooke, and the same at 75 per cent of the county Fairs of Eastern Townships, Catalogue Free.

SMALL BROS., - Dunham, Que.



SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS

Any person who is the sole head of a family, or any male over 18 years old, may purchase a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency, or sub-Agency, for the District Entry by proxy may be made at any other, son, daughter, brother or sister of the applicant. Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 20 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister. In certain districts, a homesteader in good standing may pre-empt a quarter section of his homestead. Price \$3 per acre. Duties—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate five acres extra. A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$500.

Deputy of the Minister of the Interior. P.B.—Unauthorized publication of this advertisement will not be paid for.

It pays to advertise. Try it.

CHERRY TREES

Plant a row of sour cherry trees around your farm, 6 feet clear of fences. Then cultivate both sides of the trees. Each tree will produce \$5 to \$8 worth of fruit per year. We have three grades of cherry trees.

Plums and Pear Trees

The demand for these two fruits is very heavy of late. The Northwest development is absorbing hundreds of carloads of fruit annually. Plant more Plum and Pear trees.

PEACH TREES

We still have unsold a few thousand Peach Trees of leading sorts.

BUY A FARM

If you do not own one, buy one, and plant it to fruit. 60% dividends are not unusual in fruit growing. If you own a farm, plant fruit trees: More money in growing fruit than grain or raising stock.



PHOTOGRAPHED IN AUGUST—BROCK ONE-YEAR PEACH TREES

Herbert Raspberry

This is the heaviest cropper of all Red Raspberries: 200 bushels to the acre is its record. Write for prices.

BROWN BROTHERS CO., NURSERYMEN, LIMITED
BROWN'S NURSERIES
WELLAND CO., ONTARIO

OUR TREES HAVE A RECORD FOR PRODUCING BIG CROPS WRITE FOR CATALOGUE OR AGENCY

YOU ARE INVITED TO VISIT OUR NURSERIES



RUBEROID ROOFING

Trade Mark Registered. Pronounce it RUE-BER-OID

Makes a One-Piece Roof

Water can't back up through a RUBEROID roof, for there's not a crack in it anywhere. The Ruberine Cement which goes between and over the joints makes the seams as tight and strong as any other part of the roof.

Easily laid—absolutely water-tight—weather-proof—strongly fire-resisting—RUBEROID Roofing has given perfect protection for years after its imitations have had to be replaced.

Ask your dealer to show you a sample of RUBEROID that lay 17 years on a foundry. Or write us and we will mail you a sample, with our straight-fact Booklet B on Roofing.

"SOVEREIGN" Sheathing Felt is miles ahead of building paper. Write for sample.

THE STANDARD PAINT CO. OF CANADA, Limited

286 St. James St., Montreal
179 Bannatyne Ave. East, Winnipeg
25 Pender St., Vancouver

DEALERS
EVERYWHERE



RENNIE'S SEEDS
IF YOU WANT THE SEEDS
GET THE CATALOG

DEALERS EVERYWHERE SELL RENNIE'S SEEDS
THE FINEST IN THE LAND.
WRITE NEAREST ADDRESS FOR CATALOG.

Wm. RENNIE CO. LIMITED, TORONTO, MONTREAL, WINNIPEG, VANCOUVER.



POTATO PLANTER

IF YOU WANT DURABILITY, RELIABILITY AND SIMPLICITY YOU GET THEM IN THE O. K. CANADIAN.

It requires only one team and man to plant your crop. Its automatic cup device does not puncture or bruise the seed in any way; handles it almost as carefully as by hand.

Write for our 1917 Catalogue.

CANADIAN POTATO MACHINERY CO., Ltd., 127 Stone Road, GALT, Ont.

POULTRY YARD

Mistakes and Some Suggestions

J. V. Jackson, Westmoreland Co., N.B. Mistake one being made daily in the poultry yard. I will point out a few which come under my notice most frequently and suggest ways to avoid these mistakes.

One of the most common mistakes is to over-crowd. A person goes to a poultry show, visits some enthusiastic poultry man who is making money or gets the idea somewhere that there is all kinds of money in poultry for anybody and everybody. Fortwith he gets the hen fever and the only cure is to get into poultry. Probably he only has house accommodation for a dozen hens, but wishing to get rich quick, he buys 25 or 30. If you have room for a dozen hens, get a dozen and no more. More eggs can be obtained from 12 hens in a place 10 x 12 feet than from 20 hens in the same space.

THE QUESTION OF STOCK

Mistake No. 2: Having decided to keep hens, the new poultry man begins to look around for stock. Having an eye for beauty, he goes to a breeder or of pure bred stock, and is quoted prices running from \$1 to \$5 each for A.1 birds. The price frightens him. He finds an excuse to leave saying he will call again. He calls on a fellow who is sick of the business and has a lot of cheap hens for sale at a low price. He can get these for 35 or 40 cents each. He buys them. It is here that he makes his mistake. If you are going to keep hens at all, keep good ones. If you cannot afford to buy very many first-class birds, buy as many as you can, and wait either until you can buy or raise the number you require.

Mistake No. 3: Hens have to eat. A hen is simply a machine to convert foddors into eggs. Unless she gets enough raw material for egg production and at the same time enough to build up the tissues of the body, she is not going to do her best.

One should never buy food solely because it is cheap. In the long run the cheapest food is the one that gives the best results. Last January,



A Colony House or Free Range

Every farmer who raises chickens should have one or more of these colony houses, which are portable and may be moved about to give the poultry the advantage of fresh range. Note the hopper to the left from which the chickens feed. The plan of this hopper was given in the Poultry Number of Farm and Dairy.

A neighbor asked us what we were feeding our poultry and wanted to know the cost. We told him our corn mash cost us \$2.10 to \$2.25 a cwt. He thought that this was pretty high. He was feeding boiled potatoes thickened with corn meal and was getting an average of five eggs daily from 46 hens. From the same number of

hens we were getting 24 eggs a day. With eggs at 35 cents a dozen, we were getting 60 cents a day more than he was from the same number of hens.

Growthy Chickens at a Minimum Cost

J. W. Clark, Brant Co., Ont. Good growthy chickens ready for the market in late summer or early fall can be raised at a minimum cost when fed from hoppers and allowed to



Chickens Follow the Flow to their Advantage

Much valuable food is available to chickens after the plow or cultivators have stirred the soil. It is worth while on the farms to see that the hens and chickens get the advantage of some of this food.

range in the orchard. My chickens have the run of my orchard, which is kept well cultivated so that there is lots of green food provided such as a chicken can eat. I sow a little clover for them. Since the orchard is cultivated, say once a week, the soil is in splendid shape for the chickens to dig and scratch and thus secure much animal food. The different young weeds and clover that keep popping up makes the ideal green food for them.

The chickens also do a world of good in the orchard. It is most interesting to watch them in the early morning out under the trees. Godling worms, canker worms, and so forth, which let themselves down to the ground by means of their silken ropes, are quickly snatched up and converted into chicken. The shade which the trees provide is a necessity of chick life in hot weather; hence it is an all round benefit to have them in the orchard.

My chicks are fed wheat screenings and cracked corn, all they want, as they take it from the hoppers. They are watered from a barrel, the water from which drops slowly into a drinking pan beneath. A mash feed of ground oats and corn mixed with sour skim-milk, is fed once a day. Sweet milk should never be given, as it propagates disease so readily. Buttermilk is even better than sour milk, and may be fed liberally to great advantage.

If farmers generally will feed their chicks in this way, they will raise the best chickens they ever did. Their chickens will be much better than they have been, and they will have such chickens as they will get off to market early—chickens that will not need crate fattening, and there will be not little labor in raising them.

DAHLIAS

The very best standard and novelties. Sold 5000 tubers to one grower when in bloom. Catalogue.

H. P. VAN WAGNER

STONEY CREEK - - - ONTARIO



STRAWBERRY PLANTS

40 Leading Varieties sold at Reasonable Prices. Catalogue and Price List Free. 100 Plants sent post paid to any address in Canada for \$1.00.

Dowham's Strawberry and

Pleasant Farm
STRATHROY - ONTARIO

HORTICULTURE

Pear Blight Can Be Controlled

Every bearing pear orchard has been completely destroyed, so serious have been the ravages of pear blight in some sections of Ontario. Unless growers take measures to check the depredations of this disease, pear growing will become impossible.

Growing and immature wood is most susceptible to this disease. For this reason it is advisable to let the pear orchard remain in seed to be pastured, or, if the land is abundantly productive, for hay. This will reduce the wood growth, keep the plant tissues harder, and increase the resisting power of the tree. If this system of management is supplemented by keeping all signs of the

disease thoroughly pruned out and the diseased portions burned, pears can still be grown with fair success. Did all orchardists cooperate it would be a simple matter to keep the disease under control; in fact, there is no reason why it should not be exterminated entirely. To this end government inspection of orchards by competent inspectors with authority to compel orchardists to keep the disease in check would be a great help.

Hardy Fruits for Cold Climates

W. T. Macoun, Dominion Horticulturist

Canada has immense areas where the best commercial varieties of apples, pears, plums, cherries, grapes

Baxter also is a hardy, large, handsome, early to mid-winter variety, well worthy of a trial. Hardy winter varieties are scarce.

In the most northerly districts of Canada the European or Domestic plums are a complete or partial failure owing to the fruit buds winter-kill. Along the lower St. Lawrence, where the winter air is moist, European plums can, however, be grown with good success, but throughout the greater part of Quebec and in Ontario north of latitude 45 degrees they are not satisfactory. Some varieties originated near Montreal are harder in the fruit bud than others, among the best of these being the Mount Royal, Raynes and Lunn. A French variety called Per-



A Home Made Cultivating Tool that is Cheap and Efficient.

This illustration shows a home-made Oregon fruit grower in his pear orchard. Notice the finely cultivated soil in this orchard. Photo by Prof. J. W. Cross

and small fruits succeed. There are other areas of still greater size where only the harder fruits can be grown successfully. Into these large and more newly settled parts of the country thousands of people are peering annually, and it is to give these people reliable information which will lead them to plant only the varieties which are most likely to succeed that this article is prepared. Many thousands of dollars are wasted annually by new settlers, and by old ones as well, in buying trees of varieties too tender for the parts of the country in which it is hoped to grow them.

APPLES

We owe much to Russia for giving us our hardest apples. In that country commercial apple orchards are found as far north as the district of Kazan in latitude 55 degrees, which would mean about 350 miles north of Winnipeg in this country. Nearly all the varieties which are considered of the first degree of hardiness in this country are of Russian origin. Of the hardy sorts that can be obtained in Canada, the following are recommended for trial in the most northern districts:

Summer-Blushed Calville, Lewland Raspberry, Charnaloff and Duchess.

Autumn and early winter—Antonovka, Patten's Greening and Hibernica.

Crab apples—Martha, Virginia, Hyslop, Transcendent and Dr. Saunders' new hybrids.

For districts favorable to fruit growing between latitude 45 degrees and 47 degrees, the following are recommended:

Summer—Yellow Transparent, Lowland Raspberry (for home use), and Duchess.

Autumn—Langford Beauty, Wealthy, Dudley, Alexander.

Early winter—Macintosh, Fameuse, Wolf River.

Winter—Scott's Winter, Milwaukee, Bethel, Canada Baldwin. The

diggen also appears harder than most. Some other European plums which are harder than most varieties are Early Red Russian, Glasse, Gneil, Montmorency and Richland. The dependence in the north must be upon the native plums and on the Americans. While these are not equal to the Europeans in quality they are very fair and are being rapidly improved upon. The trees, moreover, are very hardy. Some of the best varieties in order of ripening are: Aitkin, Bixley, Mankato, Cheney, Omaha, Wolf, Hawkeye and Stoddard.

(Concluded on page 26)

"THE KIDS FROM GALT"

Start on Their Journey Through Newspaperdom

Galt, Ont.—As No. 6 pulled into the C.P.R. Station last evening, the Conductor recognized two old acquaintances standing on the platform.

"Bless my heart! here are The Kids From Galt," he shouted, as the train stopped. "Where are you youngsters going? Is it business or pleasure this time?"

"Both," responded the Kids. "Business is pleasure with such a line as we carry, and the people tell us it is a pleasure to do business with our house."

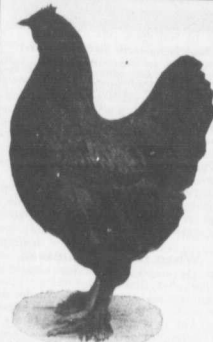


The "Kids From Galt" informed the Conductor that they were off on a journey throughout the Dominion, to make the people better acquainted with the merits of "Galt" Steel Shingles and Sidings and "Galt" Art Metal Walls and Ceiling.

The "Kids From Galt" will make their appearance week by week in this paper—a show, by logic and example, the better way of roofing barns and houses, and of constructing the interior of homes, stores, churches and schools. Watch for the advertisements with The Kids From Galt.

GALVES RAISE THEM WITHOUT MILK
Booklets Free
Steele, Briggs Seed Co., Ltd., Toronto, Ont.

GOOD WINTER LAYERS



BLACK LANGSHAN HEN

The Best Winter Layer



BLACK LANGSHAN COCKEREL

G. E. HOLT

405 Indian Road

Toronto - Ontario

Poultry Fencing that is Stronger than Seems Necessary

We make our poultry fencing close enough to turn small fowl—then we make it extra strong, so it will last for years and keep the cattle out. The heavy, hard steel top and bottom wires hold it taut and prevent it from sagging.

PEERLESS POULTRY FENCE SAVES EXPENSE

It is well galvanized so as to protect it from rust. It makes such a firm, upstanding fence that it requires less than half the posts needed for the ordinary poultry fence, and that means a big saving to you. Write for particulars.

We make farm and ornamental fences and gates of exceptional quality. Agents wanted where not now represented.

The Banwell Hoxie Wire Fence Co., Ltd.
Dept. 4 Winnipeg, Man. Hamilton, Ont.

ELM GROVE POULTRY FARM

FOR SALE—Good Cockerels. Single Comb Black Minorca, S. C. White Leghorns, Rose Comb Brown Leghorns and Bonen Ducks.

J. H. RUTHERFORD, Box 82, Long Distance Phone, CALEDON EAST, ONTARIO.

DISPERSION SALE

OF THIRTY HEAD OF
REGISTERED HOLSTEINS

JOHN BROWN

will sell by Auction at Lot 15, Con. 4 of East Oxford,
3 miles south and 1 east of WOODSTOCK, ONT., on
Thursday, March 16th, 1911

AT 1:30 P.M.

His Entire Herd of Registered Holsteins

Herd headed by Dewdrop Johanna Lad. Registered in both
American and Canadian Herd Books.

Which Fence Do You Prefer?

One that protects,
or one that does not?

Do you prefer the strong, serviceable, made-to-last **IDEAL FENCE** which does not take up valuable ground, does not harbor weeds, never needs repairs, saves worry, protects your crop, and which improves the appearance of your farm,

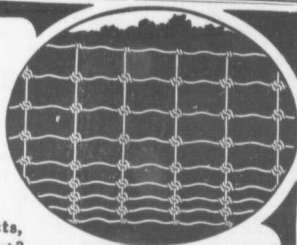
—OR—

Do you prefer to keep that unsightly crooked rail fence which covers too much valuable ground, harbors weeds, causes worry, is really no protection, always in need of repairs, and which certainly detracts from appearance of the farm?

Do you know that you can trade that old unsightly rail fence for **IDEAL FENCE**, with absolutely no outlay on your part?

Write for Our Rail Fence Booklet No. 126 telling you how to do it and giving you valuable fence information.

The McGregor Banwell
Fence Co., Ltd.
Walkerville - Ontario



Potato Culture

John N. Watts, Frontenac Co., Ont.

To get the largest crop of any variety of potatoes one must first get the land in proper condition. Do not plow when the ground is so wet that the furrow shines. Roll and harrow until the ground is well pulverized. Work in plenty of manure, but never put it in the furrows in which the potatoes are to be planted.

When the ground is ready, draw the furrow, and cut the potatoes so as to have at least one good eye to the cut. The seed and should be cut off first. A good eye is one that has not sprouted. Suckers may form around the eye but will be weak.

To get the strongest stalk, care must be taken to cut the potato so as to get as much of the fibre running from the eye to the centre as possible. Through this fibre the eye will get its sustenance until sufficient growth has been made to take care of itself.

In planting, the potatoes should not be exposed to the sun for any length of time, or blanks will be numerous. After the ground has been put in good order, shallow cultivation is best. The ground cannot be kept too clean, neither can it be worked too often, even until the vines are nearly covering the rows.

Culture of Asparagus

A. V. Mann, Lanark Co., Ont.

I prefer to disturb the asparagus bed in the fall rather than in spring, especially a belated spring when the growths peep up almost before the snow is gone. About the last work in the garden in fall, when the asparagus growths are yellow and the sap returned to the crowns, cut close over and burn. Remove a couple of inches of soil or more from the surface. This takes away sour soil and insect eggs. Apply a dressing of well-spent manure and soil mixed and over this, six inches of straw manure or leaves with branches to keep it down. This provides the winter garment.

At the end of April, weather being favorable, remove the straw and tidy the bed. Keep it within the limits by the spade on each side. Slightly fork over the surface; a spade should never be used, for the roots have ransacked the soil in all directions.

With the approach of mild weather give a dressing of salt—about one pound to each 10 square feet at intervals, say May 15, May 30, and June 15.

We generally cut about May 10, and continue until June 20. Short, stubby stalks about six inches long are the best, measuring three-quar-

ters of an inch to one inch at the base. Cut these as far below the surface as possible.

Allow a fair proportion of growths to come up to strengthen the crowns for the succeeding season.

Seed can be saved in the fall when red, sown in spring in drills two inches deep and thinned to six inches, allowing them to remain two years prior to planting.

Early Onions for Market

R. Lush, Peel Co., Ont.

We aim to get our onions on to the early market. Our method of handling them is then most simple. We just cut the tops off and take them into the market as they reach



Some Indispensable Garden Equipment

Cold frames are a necessity in starting tomatoes, cabbages and early vegetables. They supplement the hot bed and in these plants may get "hardened off" early in the season.

marketable size. We have grown from 300 to 500 bags of onions on an acre. These range in price from \$1.85 to 80 cents a bag.

The onion maggot has worked much damage on the crop. It is a bad pest and should receive the attention of our entomologists with a view of having some practical remedy discovered.

When to Plant Ginseng

Should ginseng be planted in fall or spring?—W. K. Ferson Co., Ont.

Spring planting should not be attempted by the inexperienced beginner, but it is not impossible. It could be done probably during the week immediately after the ground thaws out, but the time is too short and the soil is then full of water and in a very bad condition to work. When the ground is free of frost and the hot sun warms the soil it starts the root into action. It is one of the first plants to break through the ground in the spring. Ginseng should be planted in fall.

STUMPING POWDER

DO YOU KNOW
The Value of Stumping Powder on the Farm

—AND THAT—
MONEY, TIME AND LABOR

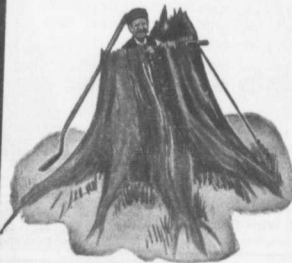
can be saved by using
HAMILTON POWDER CO'S STUMPING POWDER

FOR
Blowing out Stumps. Blowing out and Breaking up Boulders
Turning up and Aerating Sub-soil. Digging Ditches.
Splitting Logs. Excavating Cellars and Foundation Trenches.
Digging Pole and Post Holes.

Write for Descriptive Catalogue on Stump and
Boulder Blasting and Prices to

HAMILTON POWDER CO.

MONTREAL, P.Q. TORONTO, ONT. NEAREST OFFICE TO
COBALT, ONT. VICTORIA, B.C. WHERE YOU RESIDE



THE STUMP



What happened to the Stump by using
Stumping Powder.

one inch at the far below the surface. A portion of growth throughout the crown season. In the fall when in drills two inches to six inches remain two years.

For Market
Co., Ont.
Our method of pruning is simple to take up off and take to where they reach



Pruning Equipment
In starting tomato vegetables. They in these plants may the season.
have grown from ones on an acre from \$1.85 to

has worked crop. It is a receive the atologists with a medicinal remedy

Ginseng
tended in fall or Oct. did not let at- rience begin- sible. It could the week ground thaws short and the ter and the frost and the it starts the one of the through the inseng should

How to Prune Currants

Wm. Fleming, Grey Co., Ont.
The pruning of red, white and black currant bushes should be performed late in the fall or early in the spring, and the work should not be committed to an inexperienced hand, as the result would certainly be disastrous. The following method should be followed:

1. The operator should note the extent of space the bush can occupy, how close the limbs are to the ground, the crowded state of the limbs and the symmetrical condition.
2. If the bush can afford it, the limbs that lie too close to the ground should be removed, and the bush generally, if required to admit air and sunshine freely, should be trimmed.
3. About half the preceding year's growth (if the bush is in a healthy condition) should be cut back, but not in any case to injure the symmetrical condition.
4. The severity of the pruning should be controlled by the space the bush has to occupy.
5. The pruning should be performed annually.

The soil is kept cultivated through- out the summer and the rows ploughed up to during the fall.
The Kittatiny and the Snyder are the favorite varieties. They are the best shippers. The Kittatiny is a little tender and is inclined to winter-kill. The Snyder is very hardy. It is a good shipper and may be sent anywhere. The Eric is a magnificent berry, both for flavor and size. It is a softer berry, however, and is very tender, killing out badly in winter, and hence only cropping about every other year. I much prefer the Snyder.



Mr. Wilson and His Thimble Berry Patch
The article adjoining gives his method of handling this crop. Photo snapped by an editor of Farm and Dairy.

Thimbleberry Culture

John Wilson, Jr., Halifax Co., Ont.
A light, dry, warm soil and plenty of manure are the essentials to succeed with a crop of thimbleberries. On a cold soil, the berries grow small and do not give the yields. A limited district only of the country is adaptable to the culture of thimble berries. And only a limited area of any one farm ordinarily will produce them to advantage. Hence there is always a very fair market for these berries. Once the crop is ready to be picked, a fair yield is 3,500 quarts to the acre. Oftentimes the yield is higher.

Since the lightest, sandiest soil seems to suit the berries best, it follows that this soil must be liberally supplied with manure. The plants should be manured about every year, at least every other year. I would prefer to give a light application every year if the manure was available.
As soon as the canes are through bearing for the year even before, if the market has gone bad, we go through the plantation and take out all old wood. This allows all strength and growth to go into the new wood for the crop of the following year.

HELP WANTED

At once for work on Stock and Fruit Ranch Man and Wife. Furnished Home provided, and everything found. Also Single Men or good strong Boy. Apply with particulars of experience, salary expected, etc.

CRESSENT VALLEY RAICH, Crescent Valley, B.C. Via Nelson.

**Hillcrest Poultry Farm
STANDARD WHITE LEGHORNS**

I made \$3.53 per bird by selling eggs wholesale in 1910.
100 eggs at \$15. ought to hatch you 75 chicks. From those you raise 35 pullets to the laying age. With average care and average experience these birds will net a net profit of \$72.50 in one year and the birds, which are worth more than \$1.
My Breeding Hens for the season of 1911 are part of a flock of 402 pullets which in January, February and March made a new record for a flock this size by laying 2532 eggs.
The Cookshere heading the Breeding Pens records in their pullet years of 200 eggs and over.
Eggs for Hatching—March and April, \$15; May, \$12.50; June, \$10 per 100.

S. G. HANSON
HILLCREST POULTRY FARM
Box 147, Duncan, B. C.

Growing Cauliflower Plants

A. Knight, Frontenac Co., Ont.
To be successful in growing cauliflower plants, there are three essential things to be followed: 1. Proper soil, which should be of the very best obtainable—a loose, mellow soil made rich with fine rotted manure, one that will remain loose and keep moist; it cannot be too fine, for the finer the more rootlets the plant will have, and the more soil will adhere to them when plants are taken up. 2. The seed, which should be the best to be had. 3. Care in growing the plants.

If plants are required for early crop, seed should be sown by first of March in a greenhouse or properly made hotbed. The seed bed should not be too warm but of proper warmth to keep plants growing healthy. Plant the seed about one-half an inch deep, and not too thick, as thick planting makes plants too fine, and they are more apt to damp off. The bed requires plenty of fresh air on warm days to make stocky plants. As soon as the plants are large enough, that is, well out in second leaf, which should be in three weeks after sowing, transplant them into a new bed, which should be made a few days before needed.

If plants are wanted for extra early, it is better to pot them in fair sized pots, as by doing so you can plant in the field a larger plant, and not check growth. Great care must be taken to prevent any serious check; for plants are apt to have very small heads or "button up" as it is termed, if any serious check occurs in growth.

For late crop, seed is better sown in outdoor ground. Plant not too deep, in warmest and best soil you have. Thin out the plants while small to make good stocky plants. Watch for cabbage fly, and dust plants often.

SPRAYED WITH Vanco

Lime Sulphur Solution
Means Big Fruit And Big Profits

You have got to spray the fruit trees to get any kind of a crop. The most effective spray means the biggest crop and the biggest profits. **VANCO LIME SULPHUR SOLUTION** is a thoroughly reliable fungicide.

It is a clear liquid—no sediment—free from small particles—sprays easily and does not clog the nozzle. You could not get a greater amount of Sulphur in Solution than you find in the "Vanco" Barrel. This is the Spray to use for San Jose Scale, Aphid, Scab, Blight, Mildew and many other parasites and fungi that ruin trees and fruit.

VANCO LIME SULPHUR SOLUTION is better than any home-made spray, because always of the same strength and uniform quality. Specific Gravity stencilled on every barrel. One barrel makes 12 barrels for spring or 40 for summer spraying.

VANCO Lead Arsenate **KILLS ALL Chewing Insects**

Safest and surest spray for Apple Worms, Codling Moth, Potato Bug, Asparagus Beetle and other leaf-eating, fruit-destroying insects. More effective and more lasting than Paris Green—easier to handle—easier to spray—sticks longer—strength guaranteed—NEVER BURNS. Made in Canada. This insures standard quality at lowest prices, because there is no duty to pay on it.

Write for prices and free copy of our new book on sprays.

FERTILISERS—We also sell Nitrate of Soda, Murate of Potash, Sulphate of Potash and Acid Phosphate.

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Half a million acres best selected lands in the Canadian Northwest.

Special excursion in the spring to see these lands. Write now for particulars as to prices and location.

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GALT, - ONT.

A Few Good Agents Wanted

No Chilled or Overheated Eggs With GUNNS PRAIRIE STATE INCUBATOR

An honestly built, well-insulated incubator box—a powerful, gas-tight lamp—a simple heating system which automatically distributes the heat evenly to every egg—a strong yet extremely sensitive heat regulator—these "Prairie State" features maintain a temperature correct within a fraction of a degree whether the outside temperature be zero or 80 degrees.

This even heat, with a plentiful supply of moisture and fresh air, is the reason for the proven superiority of the "Prairie State" over every other incubator.

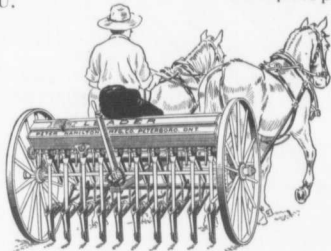
Write for our Catalogue describing the whole "Prairie State" line of poultry equipment and giving valuable information on poultry raising for profits. It's free.

GUNNS	
Prairie State Incubator	No. 0.—100 hen eggs—\$18.00
	No. 1.—150 " " " " 22.50
	No. 2.—240 " " " " 32.00
	No. 3.—390 " " " " 38.00
GUNNS Universal Hoyer	
With lamp, lamp case and smoke condenser	\$7.00

GUNN, LANGLOIS & CO., LIMITED, 236 ST. PAUL STREET, MONTREAL.
"Gunns Prairie State Incubator Gets ChLs." 12

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When investing your money you want some assurance that the investment will give you returns that will prove profitable to YOU.



FARM MACHINERY represents an investment of capital and the better the machine the surer the returns—other things being equal. In these days of keen competition the man who has the best machinery is the one who WINS.

Peter Hamilton Machinery has always given satisfaction—ask any farmer who has used it—and it will continue to do so.

We offer you a machine of durability, accuracy and uniformity of operation. Such a machine of light draft with all the other good points will prove a profitable investment. You make no mistake in buying **Peter Hamilton Machinery**

See our agent or write for Catalogue F to-day.

The Peter Hamilton Company
Peterborough, Ontario

Profits from Fruit Growing

Wm. Clements, Peel Co., Ont. Although the consumer generally pays a very fair price for fruit, it does not realize any extraordinary profits to the producer. A basket of cucumbers will sell for 25 cents. More generally, however, 15 cents a basket is the average price to the producer. An 11-quart basket costs three cents, express charges five cents, selling commission 10 per cent.—2½ cents, cartage one cent, or a total of 11½ cents, leaving at the 25 cent rate, 13½ cents for the producer—or at 10 cents, next to nothing.

Tomatoes often sell for as low as 15 cents a basket. Two years ago, for the better part of the season, they averaged 20 cents a basket. The charges on tomatoes will figure approximately the same as in the case of the cucumbers. The consumer pays at least 40 cents for this same basket, for which the producer received 25 cents. The Express Company gets about one-quarter of the gross returns received by the producer. There is, therefore, not so much money in the business for the pro-

40 gallons of the liquid to kill early biting insects, such as tent caterpillars, bud moths and chalcid-bearers. If Bordeaux is used the poison may be either two pounds arsenate of lead or ¼ lb. Paris green; if lime-sulphur is used the poison can only be two pounds arsenate of lead. The Paris green with lime-sulphur will burn.

(2) Spray again immediately after the blossoms have fallen and use the same mixture as for the first application except that the Bordeaux need not be stronger than 2—3—40, or the lime-sulphur than 1 to 40 because the application must be very heavy. An elbow should be used behind the nozzle for this spray.

(3) If the climate is very moist or the weather very wet, or if the Codling Moth is very troublesome, as in the Niagara district, it will pay you to spray once more about two or three weeks after the first application. If the Codling Moth is not troublesome the poison may be omitted and vice-versa, if the Scab is not aimed at, the fungicide may be left out.

Note.—Keep the spray mixture well agitated all the time.

Orchards sprayed in this thorough way should in most districts in an av-



One of Many Young Orchards Recently Set in Ontario

While the young orchard is coming into bearing it may be intercropped and thus an immediate revenue be derived from the land. The illustration herewith terraced with strawberries. The trees, as shown, might to advantage have been headed lower.

duce even if the consumers do pay fair prices. A greater proportion of those prices should go to the producer.

Reasonable profits can only be expected where the produce is shipped in quantities; smaller shippers have little left after deducting charges

year have not less than 90% of the fruit free from worms and 80% even of Snow apples, free from Scab.

A cool moist soil is best adapted to the growth of currants. It should tend towards clay rather than sand.

To Control Codling Moth

(Continued from page 5)

the Codling Moth and by combining a poison with the lime-sulphur or Bordeaux mixture we can control the Codling Moth.

In very moist climates it is more difficult to control the Scab than in dry climates. Therefore, in such districts it is usually well to give a third spraying about two weeks after the second, but in most parts of Ontario our experience shows this is seldom necessary.

The Scab is not equally severe every year, but is favored by cold wet springs, such as we had last season. Moreover, not all varieties of apples are equally attacked. Snow and McIntosh Red usually being most subject to it, and, therefore, requiring extra careful spraying.

We must remember that unless every part of the leaf and young fruit is thoroughly covered with the fungicide the spores may get a chance to germinate and so start the disease. Hence the importance of very careful spraying. The proper strength of Bordeaux mixture or lime-sulphur to use in each application is mentioned in the following summary:

(1) Spray first just before the earliest blossoms appear, using either Bordeaux mixture (4—4—40) or commercial lime-sulphur diluted to about 1 to 35. A poison should be added to every

POTASH MEANS PROFIT

— IN —

FARM, ORCHARD AND GARDEN

The sales of POTASH in Canada in the year ending March, 1910, showed an INCREASE of 89% over the sales in the year ending March, 1909.

This is proof that Canadian farmers are becoming more and more alive to the benefits to be derived from the JUDICIOUS USE OF POTASH ON ALL CROPS

This indispensable "plant food" can be obtained from all leading fertilizer dealers and seedsmen in the highly concentrated forms of

MURIATE OF POTASH SULPHATE OF POTASH

Write us on all matters pertaining to the cultivation of the soil and get our free publications including: "Artificial Fertilizers: their Nature and Use," "Records of Fertilizer Experiments," "Fertilizing Orchard and Garden," "Farmers' Companion," etc., etc.

DOMINION AGRICULTURAL OFFICES OF THE POTASH SYNDICATE

1105 TEMPLE BUILDING, TORONTO, Ont.

LAMENESS from a Bone Sprain, King Bone, Splint, Carb, Side Bone or any other trouble can be stopped with

ABSORBINE

Put directions in pamphlet with each bottle. Also a bottle of Absorbine ordered. Mr. Robt. Jones, Sr., Marmora, Ont., writes April 8, 1907, "I had a valuable horse with a big leg and him completely."

W. F. YOUNG, S.B.F., 123 TEMPLE ST., SPRINGFIELD, MASS
LYMANS Ltd., Montreal Canadian Agents

PIGS & CALVES WANTED

Farm and Dairy would like to purchase Yorkshire Boars, Poland China Sow and Boar, and Ayrshire Heifer Calves from 6 to 8 weeks old. Write Circulation Manager FARM AND DAIRY Peterboro, - - Ontario giving prices and ages of animals

G. The orch place trees this ing t. A orch from crop But tage I be aroun the b ting smalls. The flower past apple Engla orchard honey but that t ors in each in se mediar result er and fruit a th fertilit the B eed and growin s h o u twin at has be d e mo t h a t grower have h ke a p o v o bees fr neighb of the charid, been gl Colla injury, around trouble, limat O.A.C.

Land 160 ac ways in Belt for The s covered For fu sale and to settle DONAL

HON. J.

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day for our W. SMITH GR

APICULTURE

Bees in the Orchard

G. W. Tebb, Waterloo Co., Ont.

The ideal location for bees in the orchard. Four or five hives can be placed under old trees; fewer hives according to the age and size of the trees; place them on the north side; this shelter is afforded the hives during the hot days of summer.

A fruit grower with bees in his orchard will obtain a double yield from the same amount of land—a crop of fruit and a crop of honey. But there is a much greater advantage to be derived. Four years ago I began bee-keeping and people around are telling me that *somehow* the last year or two they are getting better shaped fruit, with a smaller amount of ill-shaped specimens, or what they call "runts."

The theory that bees in visiting the flowers fully fertilize the blossoms is past the experimental stage. In the apple orchards in Gloucestershire, in England, bees are maintained in the orchards not for the sake of their honey alone, but in order that their labors in visiting each blossom in search of nectar, may result in larger and better fruit through a thorough fertilization of the flowers. Bee-keeping and fruit growing are, as you should be, twin sisters. It has been fully demonstrated that fruit growers who have had beekeepers remove their bees from the neighborhood of their orchards, have been glad to have them return.



Bees in the Orchard Make the Fruit Crop More Certain

Hives of bees in the orchard insure a better distribution of the pollen and more fertile flowers than would occur without their aid. The honey produced is also a source of profit, and their work entails little labor during the busy season of the fruit growing.

Cellar rot is partly due to winter injury. Remove the earth from around the diseased part, cut out the trouble, disinfect with corrosive sublimate solution and paint.—L. Caesar, O.A.C., Guelph.

Land For The Settler

160 acres of land convenient to Railways in Northern Ontario's Great Belt for each settler.

The soil is rich and productive and covered with valuable timber.

For full information as to terms of sale and homestead colonization rates to settlers, write to

DONALD SUTHERLAND,

Director of Colonization,
Toronto, Ontario.

HON. JAMES S. DUFF,

Minister of Agriculture,
Toronto, Ontario.

TRY THE SMITH-FREE

Our new SMITH STUMP PULLER on every stump or timbered farm is the most efficient. It has a cost record of 5¢ a day. It has a stump puller from 1 to 3 feet through a well clear from 1 to 3 acres a day. Does the work in 10 days. Write for our catalogue and FREE TRIAL OFFER. W. SMITH GRUBBER CO., 26 Smith St., La Crosse, Wis.

Renting Orchards in Lambton County

Roy Wright, Lambton Co., Ont.

The practice of renting orchards in Lambton County has in the past been limited to a few growers. These have been very successful in making neglected orchards, which had previously been an encumbrance to the land, yield annual profitable crops. So that to-day our farmers are becoming very much interested in the fruit business. They are beginning to realize the grand possibilities of the fruit industry in western Ontario.

From 20 to 30 years ago considerable planting of apple orchards had been done by the farmers of Lambton County. Generally speaking, the planters were men who practiced general agriculture and stock raising. They did not have any definite knowledge as to the requirements of the growing of the orchards, were usually very crude. Often hay and oats were grown among the newly set trees, which drew so heavily on the soil moisture that the trees became dwarfs and stunted for want of

and who is eager to apply the most modern methods to apple production, is absolutely certain of returns that will well repay him for outlay and energy expended.

As it had been demonstrated beyond a doubt by a few growers that annual crops of first quality apples could be produced in Lambton County in the midst of many failures, it occurred to us that by making a

specialty of the business we might be able to secure some of these orchards, either by renting or by working them on shares, and in this way be able to give the owner a fair return for his orchard and at the same time procure for ourselves returns that would well repay us for labor and management. As soon as it became known that we were renting orchards (Concluded on page 25)

Get this Book FREE and a can of Paint

The Modern Farmer

is a user of paint. He knows that paint preserves — that it brightens up the farm.

But, does he know just how much—in dollars and cents—paint will save him in ten years, if he uses it properly? Railroads make it a rule to paint their property—cars, stations, freight houses, bridges, etc.—at regular intervals.

They don't wait until the paint wears off and decay sets in — as most men — because they know it will take twice as much paint to cover up the marks of time's destroying hand and stop his mischief. They have found out—in dollars and cents—just how much they save by using paint at the right time.

Just as soon as the farmer learns that same lesson — just that quick he will know how to make paint pay him a profit. Cut out the coupon, present it to a Martin-Senour Agent, and he will give you a half-pint can of Red School House Paint FREE. If no dealer near you send us and we will see that you receive the can and our Farmers' Book free.

Write today.

THE MARTIN-SENOUR CO. LIMITED
MONTREAL

Present this coupon to any Martin-Senour Dealer, and receive from a half-pint can of RED SCHOOL HOUSE PAINT FREE. For an order to see this coupon form enclosed. *The Martin-Senour Co., Ltd. Ltd.



Multiply Your Profits With This Proved Farm Power

YOU have invested a certain amount of money in your farm machines—your separator—fanning mill—ensilage cutter—pump. To make that investment pay dividends, these machines must be operated at highest efficiency and the least possible cost. Years of splendid service have shown that the most efficient operator of farm machines is an

I H C GASOLINE ENGINE

All I H C engines are conservatively rated—each engine easily developing 10 to 30 per cent more than its listed horse power.

The I H C is simple—its parts few and strong. This makes it easy to clean and keep in good condition, and gives it lasting qualities not to be found on more complicated engines.

I H C Gasoline Engines are built in all styles and sizes, 1 to 45-H.P., vertical and horizontal—stationary, portable, or tractor.

No matter what work you want done there is an I H C to do it. See the I H C local dealer and pick out the engine you need. Get it to work saving you time and money and increasing your production. If you prefer, write for catalogue and full information to nearest branch house.

CANADIAN BRANCHES—International Harvester Company of America at Brampton, Calgary, Edmonton, Regina, Lethbridge, London, Montreal, North Bay, Ottawa, Sault Ste. Marie, Toronto, St. John, Winnipeg, Winnipeg, Yorkton.

International Harvester Company of America
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I H C Service Bureau
The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizer, etc. write to the I H C Service Bureau, and we will learn what our experts and others have found out concerning those subjects.

FARM AND DAIRY

AND RURAL HOME

Published by The Rural Publishing Company, Limited.



1. FARM AND DAIRY is published every Thursday. It is the official organ of the British Columbia, Manitoba, Eastern and Western Ontario, and Bedford District Quebec Dairymen's Associations, and of the Canadian Institute, Ayrshire and Jersey Cattle Breeders' Associations.

2. SUBSCRIPTION PRICE. \$1.00 a year, strictly in advance. Great Britain, \$1.20 a year. For all countries except Canada and Great Britain, add 50c for postage. A year's subscription free for a club of two new subscribers.

3. REMITTANCES should be made by Post Office or Money Order, or Registered Letter. On all checks add 20c for exchange fee required at the banks.

4. CHANGE OF ADDRESS — When a change of address is ordered, both the old and new addresses must be given.

5. ADVERTISING RATES quoted on application. Copy received up to Friday preceding the following week's issue.

6. WE INVITE FARMERS to write us on any agricultural topics. We are always pleased to receive practical articles.

CIRCULATION STATEMENT

The paid subscriptions to Farm and Dairy exceed 5,000. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, number 100,000 copies, ranging from 8,500 to 18,500 copies. No subscriptions are accepted at less than the full subscription rates. Thus our mailing lists do not contain any dead circulation. Season detailed statements of the circulation of the paper, showing its distribution by countries and provinces, will be mailed free on request.

OUR PROTECTIVE POLICY

We want the readers of Farm and Dairy to feel that they can deal with our advertisers with our assurance of our advertisers' reliability. We try to admit to our columns only the most reliable advertisers. Should any subscriber have cause to be dissatisfied with the treatment he receives from any of our advertisers, we will investigate the circumstances fully. Should we be convinced to believe that any of our advertisers are unreliable, even in the slightest degree, we will discontinue immediately the publication of their advertisements. Should the circumstances warrant, we will expose them through the columns of the paper. Thus we will not only protect our readers, but our reputable advertisers as well. In order to be entitled to the benefits of our Protective Policy, you need only to include in all orders to our advertisers the words, "I saw your advertisement in Farm and Dairy." Compliments must be made to Farm and Dairy within one week from the date of any unsatisfactory transaction with goods thereof, and within one month from the date that the advertisement appears, in order to take advantage of the guarantee. We do not undertake to adjust trifling differences between readers and responsible advertisers.

FARM AND DAIRY

PETERBORO, ONT.

WEALTH WE DO NOT RETAIN

At the convention of the Saskatchewan Grain Growers' Association held recently in the West, the members passed a resolution endorsing the stand taken by the farmers' delegation at Ottawa, in regard to the single tax. The single tax is really a tax on land values. Such a tax, if applied on a broad scale, would be of untold value to the farming community. The value of land in cities is created largely by the farming community around the cities. Land values are so high in cities, like Toronto and Montreal, that under the single tax one or two acres of city land would frequently be taxed as much as a whole county of farming land. A tax of this kind is the only way in which farmers could get back

much of the wealth which they now create, but which is flowing into the hands of a few private parties. A small piece of land in Ottawa recently increased in value \$38,000 in one month. The owner of that piece of land pocketed that money, although he did nothing to increase the value of the land in question.

Some day we farmers will begin to see that we are creating great wealth which we do not retain for ourselves. When we do, there will be a complete change in our systems of taxation.

SOME MONEY IN APPLE GROWING

Some enthusiastic apple growers contend that there were the land along the lake and river front from Toronto to Montreal which is suitable for apple orchards planted out with apple trees, the land so planted would in a few years be worth \$300 per acre. It is furthermore contended, and on this point prominent growers have testified, that from 10 to 17 per cent. dividend may be made from apple orchards reckoning the land at a valuation of \$1,000 per acre. Mr. B. J. Case, of New York State, and Mr. A. E. Sherrington, of Bruce County, Ont., at the last convention of the Ontario Fruit Growers' Association, gave testimony to the effect that they had made such profits from their orchards. Many other men are known to have made over 10 per cent. from their apple orchards, valuing them at \$1,000 per acre.

There is money in this orchard business. Even neglected orchards, which had passed almost into decay, on being renovated and managed according to approved orchard practice, have been made to give forth remarkable results. It begins to look to the layman as if there were money in this business of apple growing. And the idea is catching on. Large areas of land are yearly being planted out to apple orchards; this year nurserymen report unprecedented heavy sales and stocks depleted.

All conditions point to a glorious future for apple growing in Ontario. It is well that this is so, and that the favorably located land, in the old banner province of Ontario, which for so many years grew grain and was valued at from \$50 to \$100 per acre, is gradually, yet none the less surely, being devoted to the production of apples and other fruits, thereby enhancing its value to \$300 and more per acre.

The day of intensive specialized farming, fruit growing, and dairying has arrived sometime since in Ontario. Those in the province who turn from their farm land are the ones who have recognized this fact and have specialized in dairying and in fruit growing. Others in the province who are not satisfied with the yearly revenues from their farms as now managed ought seriously to consider the prospects of these specialties, which have done so much for others and which can do equally well for them.

ANENT RENTING ORCHARDS

From his experience in leasing orchards, Mr. Roy Wright, of Lambton Co., Ont., gives elsewhere in Farm and Dairy this week some information of much interest. To lease neglected orchards is now becoming a practice quite common. Within the past year several companies have been formed for the express purpose of leasing several thousand acres of neglected orchards in Ontario, and by the application of up-to-date management reap a profit therefrom.

We farmers have been neglecting our opportunities. It is a reflection on us that capitalists can take our neglected orchards, pay us a rental for the same, operate them with high-priced hired labor, and still make a profit. In some cases these companies are planning to pay farmers, the owners of these orchards, to do most of the work. The rental to be paid will vary from \$10 to \$25 a year, according to the condition of the orchard.

While we are very unprogressive to lease our orchards for such small returns, and be content to watch someone else reap the larger share of the profits, there is a bright side to the situation. We will get splendid object lessons on how to manage an orchard profitably. We will see it demonstrated that our old orchards can be made more profitable than we ever dreamed; and furthermore, the orchard during every year that it is under expert management will become more valuable. Many old orchards, which otherwise would gradually have died out, will be restored to productiveness through the renter, then be continued in productivity through the owner when the lease expires.

It should be much more profitable for us, however, did we undertake for ourselves the renovating of our old orchards. Why not do it?

FRESH VEGETABLES GROWN AT HOME

Why is it that in so many farm homes fresh vegetables in season, and in abundance such as only a farmer's garden can provide, are scarcely known at all? The planting of the garden comes in one of the busiest seasons of the year; hence, unless the work has been planned before-hand, it is apt to be neglected altogether. With a little forethought there is no reason why the planting of the kitchen garden should take a great deal of time, or delay unduly other most necessary spring work. With a proper layout of the garden, everything planted in long rows so that practically all of the work can be done by horse power, labor would be reduced to a minimum.

We farmers ought to have vegetables continuously, starting with asparagus, spinach, and rhubarb in the spring, on throughout the summer till we reach the late vegetables in the fall that are stored for winter. A regular supply of green vegetables gives variety and healthfulness to the diet and reduces grocery and meat bills.

Let us seek to provide such a sup-

ply. Plan the garden and order the seeds now. Seed catalogues of the firms advertised in Farm and Dairy are a great help in planning the garden. Write for them and order your seed early and have such a garden that every neighbor who sees it will decide to "go and do likewise."

APPLES MUST BE SPRAYED

Now that the Ontario Apple Buyers Association has passed a resolution prohibiting its members from buying apples from men whose orchards have not been sprayed, as they did at their annual meeting last fall, spraying will, if this mandate be lived up to, be made absolutely necessary. Some action in this direction has been needed. Nothing else has such a depressing effect upon the market or tends so strongly to a condition of over-production as does poor produce. One barrel of poor apples does more to create over-production and low prices than 12 barrels of good ones. Last year in Ontario not 20 per cent. of the apple crop was marketed as No. 1.

In many parts of Ontario new interest is being awakened in orcharding. Young orchards are being planted extensively. Old orchards are receiving more care than heretofore. The profits from spraying old and neglected orchards have been abundantly demonstrated in many of our fruit sections through demonstration orchards, but there is still much room for improvement in every section. In some sections no spraying whatever is practised. If the apple buyers will live up to their resolution, and absolutely refuse to take fruit from unsprayed orchards, much good will result.

PRACTICAL SUBJECTS IN SCHOOLS

The recommendation made by the Ontario Fruit Growers' Association to the Ontario Government at their last annual meeting, that lectures on insects and fungus pests be given in rural schools, particularly in the fruit districts, is a commendable one. Too much time is spent in our schools on subjects, which will be of little value to the scholar in his after life. Studying the life habits and methods of control of the insect and fungus pests, which the rural child will have to combat during his natural life is of such importance as to justify these being taught.

Why not have studies of this nature incorporated in the readers? Ontario school readers, in fact the readers in any of the provinces, do little more than teach a pupil how to spell and write with grammatical precision. Grammatical precision and spelling can be taught equally as well if the subjects dealt with are of a practical nature.

The readers used in the schools of France, teach subjects of a practical nature. Questions of soil physics, mining, and manufacturing are treated in a simple way in the elementary readers. The children are therefore early lead to enquire into the natural and industrial phenomena which lie all round them.

This sort of thing should be adopted in our rural schools. Extra lectures on these subjects are not called for but they could be embodied in the regular work of the school through the medium of the school reader.

For your consideration we present you this week with our Third Annual Orchard and Garden A Request Number. We have of you spared neither time nor expense in securing for this number the best of illustrations, the most practical and helpful information of a dollars and cents value to you. It costs you—if you are a regular subscriber—less than two cents! Wouldn't it be a good thing if you would pass this issue on to a neighbor? He would in all probability like to subscribe to Farm and Dairy, did he but know of it and of the Great Dollar's worth of reading it contains. Ask him to subscribe and thereby help us to make Farm and Dairy still better than ever. Our next special issue will be Our Third Annual Dairy Number, out Our April 6. Get your neighbors in line to profit from that special issue. We will make it worth your while.

Our standard varieties of apples that have been grown extensively for years and are well known and popular on the market are the safe ones to plant. New varieties can well be left out of consideration until favorably pronounced upon by our Experiment stations. In many cases new varieties do not live up to the claims that are made for them. Even those varieties of trees, which are producing apples of a good quality are not as profitable as are such varieties as Greening and Baldwin, which are located in the same orchard. New varieties are not known to buyers and they will not pay as high a price for them as for standard varieties with which they are acquainted.

While the greatest demand always will be for fall and winter varieties of apples, we should not overlook the fact that in all of our large cities, and in the west, there is a profitable if somewhat limited market for the earlier sorts. Yellow Transparent and Astrachan apples marketed in Toronto have returned 25 cents a standard basket to the growers after all expenses have been paid. Each year the shipments of early apples to the west have been increasing, which would indicate that this trade is profitable. Duchess apples have been shipped to Great Britain in the last few years with good results to the shippers. The main objection to early apples is that they come at a time when the farmer does not care to be bothered with them. Anyone, however, who will pick and market early apples in their proper season, is sure of good returns.

Send us one new subscription with your own renewal. The two for one price for \$1.50.

FARMERS' RIGHTS

Thos. McMillan, of Huron Co., Ont., like Mr. Drury, is also an "On-time farmer, and is giving of his time and ability to further the present forward movement of organized agriculture. Though still on the sunny side of 50, Mr. McMillan has taken a life-long interest in the agricultural, political and economic problems of our country. The natural bent of Mr. McMillan's mind, coupled with his wide experience in business life, has given him opportunities to study and discern in these matters such as comes to but few of us farmers.

Mr. McMillan was born upon the old homestead of which he is now owner. For 10 successive winters, when he was from 15 to 25 years of age, he was enthusiastically engaged in the inspiring work of discussing all the varied questions which naturally come before an old-time debating society. During the same period, he also repeatedly contributed prize essays upon agricultural topics to various farm journals. Such a training, together with his thorough knowledge of agricultural conditions and his success as a practical farmer, brought his service into recognition in the earlier days of farmers' institute work. As a lecturer at institute meetings, and as a judge of animals, he has visited almost every county in Ontario, and has also been engaged in agricultural educational work in other provinces of the Dominion.

Along with his father and brother, Mr. McMillan was also for many years actively engaged in the export cattle trade to Great Britain, and in the importation of Clydesdales, in which business one member of the firm always followed the shipments in person. This experience enabled him to gain a first hand knowledge of the actual conditions prevailing in free trade England, the price and value of British goods, cost of living, and so forth, which information thus gained proves to be invaluable when applied to the discussion of the trade and tariff question, as it is now being brought home to the great mass of Canadians.

During the season of 1905, before the Government Tariff Commission, Mr. McMillan ably presented the farmers' case, at its sitting in London, Ont. Since that time he has made a continuous study of the tariff question from the standpoint of the farmer as well as from the point of view of the great body of our consuming population, with the result that he believes, and is able to present a convincing testimony to prove that the Canadian people have been nursing a fiscal system, which has the effect of robbing the farm, and robbing the breadwinners of the nation, to build up great cities and nourish millions.

An Awakened Giant

Huntingdon Gleaser
The giant who has slumbered has at last awakened. The ties and bandages with which he has been bound and blinded are being snapped, and the world shown that not the railway projector, not the manufacturer, not the combiner, is going to rule Canada, but the man who has made Canada what it is—the farmer.



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THE HANDIEST THING

ABOUT A GARDEN WHERE BUSHES AND FRUIT TREES ARE TO BE TRIMMED IS A PAIR OF PRUNING SHEARS LIKE THE ONES SHOWN IN THIS ILLUSTRATION

Given Away



Given Away

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**HOWARD FRY, Box 162,
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Creamery Department

Butter makers are invited to send contributions to this department, to ask questions and to suggest subjects for discussion. Address letters to Creamery Department.

Hints on the Care of Culture

G. G. Publow, Chief Dairy Instructor, Kingston, Ont.

It is well to have a special box in which to keep the mother culture. This box should be well insulated and in it a uniform temperature can be maintained. Such a box can be made by any one and will be found to be invaluable in maintaining a uniform temperature. The atmosphere

in the make-room often varies 30 or 40 degrees or more in 20 hours. Under such conditions, unless protected in an insulated box, there can be little hope of having a uniform culture from day to day.

If the temperature of the culture one day is at 90 and the next day at 70 or below, one might do his best with the culture and get very indifferent results. One needs to use much judgment as to what is likely to take place under varying conditions; find out how much the culture does change and then "set" accordingly. With milk or cream at a high temperature, set more sparingly; at a low temperature, set more heavily. Once having found the right method stick to it. Do not change from day to day.

If the culture goes wrong, get a fresh one. It is practically impossible to bring it back by setting less; at least such a practice is unsatisfactory and it is not to be recommended. If one would keep a culture for long periods, set more lightly and degrees lower. It is not well to place it on ice save in the case of it being too ripe late on in the day and one was not yet ready to use it. In our greatest gathering creameries, our greatest trouble comes through thick cream delivered in an over ripe condition and in being unable to keep ripe cultures and have the prep favor from day to day.

Have you forgotten to renew your subscription to Farm and Dairy?



Saskatchewan Dairymen Recently Assembled in Convention at Regina

Our illustration herewith shows those enthusiastic dairymen of Saskatchewan who met recently in annual convention in Regina. Some of the men in the front row were the speakers at the meetings and are well known to many Eastern Dairymen: from left to right those in the front row are: Wm. Newman, Lorneville, Ont.; Geo. H. Barr, chief of the Dairy Division, Ottawa; Hon. W. E. Motherwell, Minister of Agriculture for Sask.; W. A. Wilson, Supt. of Dairying for Alberta; C. L. Marker, Supt. of Dairying for Sask.; W. A. Wilson, Supt. of Dairying for Alberta; and C. Boyd of Moosejaw.

How Do You Judge Fencing?

Are you an expert? Do you know a good piece of fencing when you examine it? Or do you judge a certain make of fencing from the records it has made with your neighbors?

No matter how you judge fencing, you'll find the quality of the Leader fence fully up to your standard. It's a fence you can purchase with confidence, for our name stands high in the estimation of fence buyers. Our long experience and our reputation are a guarantee that Leader fence is top-notch in every respect.

Built throughout of No. 9 hard steel wire with a double-grip lock, and galvanized according to our own specifications, the Leader fence will give you lasting service. It is built to withstand the severe extremes of the Canadian climate. You cannot buy more value for your money. If you pay less than the Leader price you simply get lower quality.

Send for our booklet. It contains fence facts you will be glad to know. It describes the Leader fence and the double-grip lock in a clear and interesting manner. It is a booklet you ought to have in your hand this very minute. We will also send a Leader fence lock free, if you'll ask us for one.

Tell us if you are ambitious to become an agent for a complete line of farm and ornamental fence and gates. We've a good proposition for unrepre-

sented districts. Leader fence is a wonderful seller—and we heartily co-operate with our agents in securing sales.

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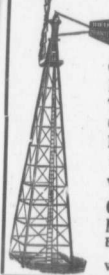
Manitoba Dairymen Convene

The energy and enthusiasm with which the delegates to the Manitoba Dairymen's Convention in Winnipeg recently engaged in their deliberations was but a reflection of the new interest that is now being taken in dairying throughout Manitoba and the entire west. The president, J. P. O. Allaire, St. Boniface, referred to the work of the dairymen for the past year as having been satisfactory. The amount of butter produced had been greater than during preceding years; the output of cheese had been most encouraging. The milk supply had doubled.

OFFICERS ELECTED

The officers elected for the following year are: Pres., J. P. O. Allaire; 1st Vice-Pres., L. A. Race, Brandon; 2nd Vice-Pres., W. E. Bonner, Winnipeg; Sec.-Treas., L. A. Gibson.

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BUTTERMAKER WANTED-First-class experienced buttermaker at once. References preferred. Apply to D. Grant, Beaverton, Ont.

FOR SALE-One ten h.p. Wright Boiler. New tubes. Will sell cheap. Write for particulars. John M. Sherk, Pt. Abino Creamery, Ridgeway, Ont.

WANTED-First-class cheesemaker for small factory in Essex county. Awaiting references and experience to W. D. Urs, Fairplay, Ont.

WANTED-A man to do general farm work, a good plowman and milker, a yearly engagement to the right man. State age, salary, booklet.-Apply Harold Jones, Matilda, Ont.

WANTED-Two men to work in cheese factory. One man for seven months and one for six months with one or two years experience preferred. Address J. H. Manuell, Springfield, Ont.

WANTED-Persons to grow mushrooms for us in large quantities in garden frames, sheds or cellars, \$15 to \$30 per week, send for illustrated booklet and full particulars.-Montreal Supply Co., Montreal.

TO RENT-For a term of years, the Ministry Road Cheese and Butter Factory, situated in one of the best farming localities and near railway.-Apply Archie Walker, Secretary, Barwell Road P.O., Middlesex Co.

CREAMERY FOR SALE-Well equipped and in running shape in one of the best mixed farming districts in Alberta. Manufactured last year about 40,000 lbs. of butter. Close to railroad, good water and coal mines, one acre of land, large frame building and machinery must be sold at a bargain. Several fine quarter sections of land adjoining also for sale. For particulars, write apply to John Barnett, Barricuts, Innisfail, Alberta.

Winnipeg; Directors-District No. 1, G. K. Brockman, Lunard; No. 2, C. H. Tully, Rankin; No. 3, F. X. Jobert, St. Pierre; No. 4, J. J. Ring, Crystal City; No. 5, Geo. Steele, M.L.A., Glenboro; No. 6, J. R. Stanton, Hamiota; No. 7, J. R. Nesbit, Shornubee; No. 8, J. R. Dutton, Gilbert Plains; general directors, W. B. Gilroy, MacGregor; and Jas. Carruthers, Jas. Murray, and P. B. Tustin, of Winnipeg. Professor Mitchell was made honorary member and director, in return for valuable services rendered during the past year.

The convention was one of the most successful ever held by the Association since its organization over 20 years ago. A number of prominent authorities delivered addresses. Amongst those who spoke were Geo. H. Barr, Chief of the Dairy Division, Ottawa; Professor J. W. Mitchell, of the Manitoba Agricultural College; Professor Bedford, Professor W. H. Peters, and E. H. Farrell, of the Manitoba Agricultural College; and T. B. Tutin, Chief of the Food Division of the Health Department of the City of Winnipeg.

TUBERCULOSIS

The question of bovine tuberculosis and its relation to the health of the human family was discussed by Mr. Tustin. He illustrated his talk with specimens of tubercular organs of various animals. A striking illustration was that of a liver weighing 58 lbs., which had been taken from a tuberculous cow. Since it has been demonstrated that bovine tuberculosis is communicable to man, the speaker pointed out that the dairymen who sell milk to cities and towns for consumption by infants and children, his cows being tuberculous, is no less a criminal than the man who strikes an innocent baby in the face.

TRANSPORTATION OF MILK AND CREAM A report brought in at a business session concerning the matter of transportation of milk and cream, is of much interest to dairymen generally. As Farm and Dairy readers will recall, the Manitoba Dairymen's Association early last season made an effort to secure better rates on sweet cream and better conditions of handling the milk by baggage. The Railway Commission, after hearing the evidence placed before them in this connection, issued an order that sweet cream for butter making should be carried at the same rate as sour cream, also that whether the loading was done where there was an agent or not, a receipt for the number of cans said to contain milk should be given to the shippers. The Executive Board expressed to the convention that the services of Professor Mitchell to the association had, during the past year, been invaluable. Professor Mitchell had appeared before the Railway Commission and had been very active in securing their decision.

Reject Bad Milk

W. D. Clapper, Peterboro Co., Ont.

One point on which cheese makers are lamentably weak is that they have no way of being able to return to the farmers dirty or over ripe milk. One can of bad milk sent home is worth more than an hour's talk on the advantages of delivering good milk. If all makers would throw down dirty milk, there would be no trouble in getting patrons to take care of the product. Half of the farmers dump the milk into a can without straining and think that is all they have to do.

It is rather difficult, however, for one maker to reject milk when the maker at the next factory will take it in. Makers should stand together on this question and absolutely refuse to take milk rejected at another

factory. Time and time again I have refused to take milk rejected at another factory, but at the same time the milk I rejected was readily disposed of at a neighboring factory.

UNDERSTAND EACH OTHER

Why cannot we cheese makers get together and have an understanding with each other, whereby we can refuse all milk and not be imposed upon by our employers for so doing. The time is here when the cheese-maker must put up a fancy article. We cannot do it if the patrons do not give us good milk and we should have authority to reject all milk that will not make first-class cheese.

I do not say that I would send back bad milk from a patron who usually sends good milk, without giving him an explanation. If the otherwise good patron did send in milk slightly sour, I would take it in, do the best I could with it, and visit that patron personally to see what was the matter. Such patrons will remedy defects when their attention is called to them. But to the careless patron I would send it back.

I am enclosing \$1 for my renewal subscription to Farm and Dairy. I have taken Farm and Dairy for two years. It is a fine paper for my home. I am going to change my stock

as your paper has helped me to find the Holstein breeders.-G. L. Turner, Sherbrooke Co., Que.

Advertisement for 'FARMERS GARDENERS! YOU NEED THIS BOOK' by Kenneth McDonald & Sons, Ottawa. Includes an illustration of a seed packet and text: 'IT TELLS ALL ABOUT THE SEEDS THAT BRING THE DOLLARS MAILED FREE WRITE TO DAY'.

Advertisement for 'SHARPLES Tubular Cream Separators'. Includes an illustration of a woman and a separator machine. Text: 'are the only one of their kind. Yet Tubular sales easily exceed most, if not all, others combined, and Tubulars are probably replacing more common separators than any one maker of such machines sells. Why is this? It is because Tubulars are later than, wholly different from and very superior to all others. Tubulars are built on the only known principle for overcoming the many parts and many disadvantages of other separators. This construction gives Tubulars twice the skimming force of other separators, enables Tubulars to skim faster and twice as clean as others, and makes it entirely unnecessary to use disks, wings or other complicated contrivances in Sharple's Dairy Tubulars. Dairy Tubulars are thus the most efficient, only simple, most durable, and only really modern separator you have one. You want a modern machine, and will not be satisfied until you have one. So why not get a Tubular in the first place and save yourself the expense, loss of cream, extra work, and disappointment to follow the purchase of a "peddler's" or any other complicated or (so called) cheap machine? You can own and use a Tubular for less than any other. Wear a lifetime. Guaranteed forever by the oldest separator concern on this continent. One of Canada's leading industries. In use many years all over the world. Patented and cannot be imitated, otherwise other manufacturers would be making Tubulars and not Sharple's. Our local representative will show you a Tubular inside and out. Ask us his name and address. Write for catalogue No. 25. THE SHARPLES SEPARATOR CO., Toronto, Ont. Winnipeg, Man.

Advertisement for 'WESTERN LAND FOR SALE'. Text: 'In areas to suit purchasers, from 160 acres upwards, situated on or near railways in the Best Wheat, Oat and Stock Growing Districts of SASKATCHEWAN and ALBERTA 250,000 Acres to choose from Prices low. Terms generous and helpful. Special inducements given actual settlers, and those requiring blocks for colonization purposes. Write for particulars. Reliable agents wanted in every county. F. W. HODSON, & CO., TORONTO, ONT. Room 100 Temple Building Branch Office:-North Battleford, Sask. During 1910 we sold over 133,400 acres; during the past four years we have sold over 400,000.'



CONTENTMENT comes neither by culture nor by wishing; it is reconciliation with our lot, growing out of an inward superiority to our surroundings.

The Road to Providence

(Copyrighted)

MARIA THOMPSON DAVIES

(Continued from last week.)

SYNOPSIS OF THE ROAD TO PROVIDENCE

Mrs. Mayberry, a country physician's widow, living near the town of Providence, has taken into her home Elina Wingate, a beautiful young woman and a famous singer who has mysteriously lost her voice. Mrs. Mayberry is much loved and respected throughout the countryside both for her goodness of heart and for the skill with which she treats minor ills. Her son Tom is a rising doctor in the city, but among the home neighbors there is a humorous preference for "Mother Mayberry's remedies. In learning to mix and bake "light biscuits" and accomplish other domestic tasks Miss Wingate becomes happier than she has been at any time since the loss of her voice compelled her to cancel her contracts. Mother Mayberry takes into her home Martin Luther Hathaway, the little son of a poor missionary. Miss Wingate discovers in the course of cutting out doll clothes for Eliza Pike, how much she is coming to care for Tom Mayberry, and in an anxious consideration of her future, realizes that his strongest desire in life is to be able to restore her power to sing.

"I'll be here, and thank you for— the Doctor, and with a laughing gleam of attention," answered Miss Wingate at both his mother and Miss Wingate he took himself off in the direction of the barn, for the purpose of saddling his horse for his afternoon visit to his patients beyond the Nob.

"Ain't he good to look at?" asked Mother Mayberry as she watched his tall figure swing down the garden path. "Good looks in a man can be a heap of pleasure to a woman, but she mustn't let 'n to him."

"I believe," said Miss Wingate in an impersonally judicial tone of voice, "that Doctor Mayberry is the very handsomest man I ever saw. One would almost call him beautiful. It isn't entirely that he is so tall and grand and has such eyes, but—do you know I think it is because he is so like you that he is so lovely." And the singer lady tucked her hand into Mother Mayberry's with a shy blush.

"Talking folks kinder shines 'em up, same as furniture polish, honey-bird," laughed Mother Mayberry with a light on the compliment. "You're a-rubbing some on me and Tom Mayberry. But he were the best favored baby I most ever saw, if I do say it, as shouldn't I."

"Oh!" said Miss Wingate delightedly. "I know he must have been lovely. What was he like?"

"Well," answered Mother reminiscently. "He were about like he are now. He come so ugly I cried when I seen him first, and Doctor Mayberry teased me about it to the day of his death. He called Tom 'Ugly' for short. But he mighty soon begun to sprout little pleasing ways, a-looking up under them black lashes and a-laughing across 'em. His cheeks was rosy, his back broad and his legs straight, same as now. He teethed easy, walked soon, have never learned to talk much yet and had his measles and whooping-cough when his time come. I just thought he were something 'cause he were mine. All babies is astonishing miracles to they mothers."

"But I'm sure Dr. Mayberry was really wonderful," said Miss Wingate, instantly sympathetic. "Had he always such black hair?"

"Borned with it. Now, my little

girl had beautiful yellow curls, and I can show you one, by the Lord's mercy I've got it." Mother paused, and an ineffable gentleness came into her lovely old face. "I want to tell you about it, honey-heart, 'cause it have got a strange sweetness to it. She wasn't but five years old when she died, taken sudden with pneumonia curl bad. Nobody thought to cut me one of her curls before they laid her away, and when I come to myself I grieved over it more than I had oughter. But one day when the fall come on and the days was short and dark; and it looked like nothing couldn't light up the old house with that sunshine head gone, me almost a-feeling bitter and questioning why, Tom went out and picked up a robin's nest that had blown down from a tree in the yard. And there, wound around inside it, was the little curl I had cut off in the spring, out on the porch, what had tagged into her eyes and worried her! The mother bird had used it to make the nest soft for her babies and now didn't need it no more. When I looked at it

I took it as a message and a sign that my Lord hadn't forgot me, and I ain't never mistrusted Him again. Come, let me show it to you."

CHAPTER V.

THE LITTLE RAVEN AND HER COVERED DISH

Wednesday morning dawned clear and bright. From our Providence Nob the round red old sun looked jovially and encouragingly down upon Providence, up and stirring at an unusually early hour, for in the middle week came Sewing Circle day and the usual routine of work must be laid by before the noon meal, and every housewife in condition to foregather at the appointed place on the stroke of one. Mrs. Peavey had aroused the protesting Buck at the peep of dawn, the Pikes were all up and breakfasting by the first rays of light that fell over the Kidged, and the Hoover biscuits had been baked in the Pratt oven and handed across the fence fifteen minutes ago. Down the road Mr. Petway was energetically taking down the store shutters, and Mr. Mosbey was building the blacksmith shop fire. Cindy had milked and started breakfast and Mother Mayberry had begun the difficult task of getting the Doctor up and ready for the morning meal. Martin Luther had had a glass of warm milk and was ready for an energetic attack upon his first repast.

Above, in her room under the gables, the singer lady had been awakened by the brushing of a white-capped old bloom bough against her casement as it attempted to climb with all its lust into her dormer window. As she looked through the mist, a long golden shaft of light shot across the white flowers and turned the tender green leaves into a bright yellow. Suddenly a desire to get up and look across at the Nob possessed her, for the arrival of the sun upon the scene of action was a sight that held the decided charm of novelty. And on this particular morning she found it more than worth while. Providence lay at her feet like a great bouquet of lilacs, locust and fruit blossoms. The early mist was shot through with long spears of gold and the pale smoke curled up from the brick chimneys and mingled its pungent wood-odor with the perfume laden air. She drank in great drafts of exhilaration and delighted her eyes with the picture for a number of minutes, until an intoxicating breakfast aroma began to steal up from Cindy's domain. Then, spurred by a positive agony of hunger, it took the singer lady the fewest possible number of minutes

to complete a dainty and most ravishing breakfast toilet.

"Why, honey-bird," exclaimed Mother Mayberry as she descended the steps and found them all at breakfast in the wide-open dining-room, "we've got to get up so soon for it's Wednesday, and the Sewing Circle meets with me, so Cindy and I must be a-stirring, but I had break in my mind for you two hours from now. You oughter done it. Them ain't orders in your prescription."

"I'm so hungry," she pleaded with a most wickedy humble glance at the Doctor, who was busy consuming muffins and chicken gravy. "Can't I have a breakfast now, Doctor—and the other one two hours later? Please!"

"Yes," answered the Doctor, "but don't forget the two glasses of cream and dinner and some of the Sewing Party refreshments, to say nothing of supper—and are you going to make custards for us to eat before seeking our downy couches?"

"The cup custards are going to be part of the Sewing Circle refreshments. This you'll answer for him."

"I want to show off my teaching to the Providence folks. Give the child some chicken, Tom Mayberry, and I'll take you to your work. We don't want you underfoot for seeing our downy couches?"

"Don't you need my help?" asked the Doctor, as, in a disobedient frame of mind, he lingered at the table to watch the singer lady begin operations on her dainty breakfast.

"Well, you can set here and watch that Elinory gets all she wants and around. There; call me the Deacon! I wonder what the matter is!"

And Mother Mayberry hurried out of the house and down to the front gate to Eliza Pike, who was coming slowly up the road.

"Good-morning, Sister Mayberry!" he said cheerily enough, though there was an expression of anxiety on his gentle old face, "as this unusual find you up, even at this unusual early hour. Your lamp is always burning to meet emergencies. Mrs. Bostick is not well this morning and I came up to see if you could find a moment to step down to see her soon. I also wanted to ask Thomas to stop in for a moment on his way over to Flat Rock. I am sure that she is not at all ill, but I am just overly anxious."

"Why, of course, we will both come right away, Deacon! What did she eat last night for supper? She oughter be careful about her night eating."

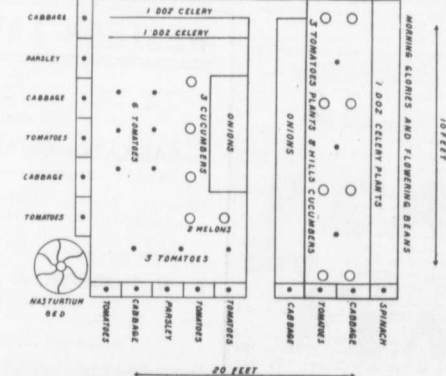
"Let me see," answered the Deacon thoughtfully. "I think we both had a corned beef and toast administered by our young sister, Eliza Pike. I recall I pleaded for some of the peaches, still in the jar you gave Mrs. Bostick, but was sternly denied. As he spoke the Deacon beamed with affectionate pride over having been vanquished by the stern Eliza."

Just at this moment from around the corner of the Pike home came the young woman in question, with a pitcher in one hand and a covered dish in the other. Et followed her with a plate wrapped in a napkin, and Billy brought the water with him. A sket of cool water which she sloshed over his bare feet with every step.

"Why, Deacon," demanded Eliza sternly, "you ain't gone and et breakfast with Mother Mayberry, with I told you about Maw making light rolls before she went to bed 'cause to-day is Wednesday?"

"No, Eliza, answered the Deacon meekly, with a delighted glance at Mother Mayberry out of the corner of his eye. "Neither Mrs. Bostick nor I would think of breakfasting without your superintendence. I was just starting over to see that you felt indisposed and would like to see you and Sister Mayberry, along with

(To be continued.)



Plan of Prize Garden, Grown by a 12-year-old Boy, Maynard Fraser, Russell Co., Ont. His net returns for the first year were \$10.05 on a space 10x20 ft. See article this issue.

Maynard Fraser
Read his little garden in many books I could South was by 20 ft. as a dum the stable using as I away all load of adding abo well spad Then I melons, rat tuce, and tomato pl On the empty ora end I the bago or pa we cut a strong bar down. The cucu onion bed

Prize Garden Contest

Last Spring Farm and Dairy offered prizes for the best garden made and cared for by our boy readers. We have been pleased to award the prize for the best garden to Maynard Fraser, of Russell Co., Ont. Maynard is only 12 years old and from the plans of his garden which we publish here, with and the illustrations of him and his garden, we are inclined to think that he is bound to be a progressive farmer some day. The arrangement of his garden seems a very good one, and when it is considered that the cost of material was so small and his re-



A Prize Winner in His Garden

See article and plan of garden in this issue. turns so great, we must admit that he deserved the prize. An order for \$1.50 worth of seeds or plants was sent to Maynard that he may have them to plant in his garden next year. MAYNARD'S LETTER TO US "After reading in Farm and Dairy last spring about the offer you were making to your boy readers, I started to look around our small village lot for a corner to make a garden on. There are so many trees on the lot and so



Maynard Fraser, 12 years old, in his Prize Garden

Read how he made \$14.15 net profit on his little garden last year. See plan of his garden in this issue. many buildings near that the only spot I could find was the one on the south west of the stable. It was 10 by 20 ft., and had always been used as a dumping ground for refuse from the stable. It did not look very promising as I surveyed it. After cleaning away all the rubbish, drawing a few loads of earth from the woods and adding about a bushel of ashes it was well spaded and worked. Then I planted onions, cucumbers, melons, radishes, parsley, spinach, lettuce, and set out cabbage, celery and tomato plants. These cost me \$1.00. On the south east side we placed an empty orange crates close together. In one end I put a tomato plant, in the other a low growing plant, cabbage or parsley. As the tomatoes grew we cut away all but three good strong branches, all others being kept down. The cucumbers started to cover the onion bed. We put sticks in the

ground and tied them all up; made them run up and then down, by pinching off the vines when each one was about three yards long. They were covered with cucumbers of all sizes all summer. Will give a list of contents of garden with market prices at which I could have sold what I grew. 3 dozen bunches celery at 6c. \$ 1.80 6 heads of cabbage..... .30 3 dozen large cucumbers..... .50 3 small cucumbers..... .75 20 pairs onions..... .75 3 pairs green tomatoes..... .45 3 pairs ripe tomatoes..... .75 20 plants of radish..... .50 Parsley and spinach..... .50 Prizes at Fair..... .57.8

Total income..... \$12.05 Outlay, \$1.00; net returns, \$12.05; with yard 100 per cent. neater and brighter."

Pruning Moss Roses

What is the best time and the best way to prune moss roses? They produce a lot of wood and few roses. The ground is a clay loam.—W.N. Kent Co., Ont.

The best time to prune moss roses, or any of the hardy roses, is usually in the spring as soon as the growth buds show signs of starting (early about the first week in April). The time of pruning depends upon the season. Moss roses should be pruned by cutting away or shortening the last season's growth, leaving about three or four inches of the base of the growth made last year. With strong growth or canes of new growth starting from the bottom near the root, these can be cut back to about twelve or fifteen inches in length.

All weak growth should be removed if the bushes are very dense and thick with growth. To secure good roses a growth of good strong wood is necessary.

Every Farmer and His Garden

ED. LANE, WATERLOO CO., ONT. Get a man or woman contented with their food and they are different persons altogether; if they enjoy their food they are more likely to enjoy their work. Hence the great value added to a garden and the stuff that may be grown therein. If we turn a part of the farm into a garden it is not all extra work as we have only the same number of acres that have to be attended to. Adding variety to work in this way will bring enhanced returns directly and indirectly that the owner may never know of. For a few all are we not here for enjoyment in this life.

How nice it is, a couple of weeks after the frost has left the ground to go into the garden and cut a bunch of asparagus and cook it for dinner, and this every day for six weeks or more. The monotony of this as good as cabbage can be picked from cabbage stumps. If we have done as we should and stored the cabbages, roots and saved the stalks to plant close together. Then as the frost is over of the ground. Then we could have a row of garden orach to pick from which is equal to it or better than spinach and bears five times as much green stuff. It is one of the first things to start to grow in the spring. And then we can have a row of beets to thin out and boil as greens followed by large beets later on. The same may be said of sweet young carrots. There is no reason why we can not have green peas on the table the last week in June or the first in July.

FRUITS AT ALL TIMES What greater delicacy can any one have than a bowl of strawberries and cream after a hard day's work, enjoyable alike to rich and poor. We

have the land and manure and we have the cream. With a little forethought and exertion we can have the strawberries too and at a season of the year before any wild fruits come in. We may have raspberries and black berries and we should also have a few bushes of gooseberries and black, red and white currants. By this time we will be into the apple, pear and plum season. With a little forethought we can have fruit every week in the year. Another table delicacy enjoyed by most people is celery. This we can grow readily and it will be available at least three months in the year.

CAPABLE OLD COUNTRY DOMESTICS arriving weekly in summer, fortnightly in winter. Apply now, The Guild, 71 Drummond St., Montreal

No. 3 Brownie Camera Pictures 3 1/4 x 4 1/4. Price \$4.00.



This latest addition to the popular Brownie family meets the demand for a camera, which is equipped with the essentials for a high-class of amateur work, but is so simple that even the children can use it with good results. This camera has the first quality meniscus achromatic lens, Eastman rotary shutter, fixed focus, two view finders, so that either vertical or horizontal exposures can be made. It is a neat and attractive camera, covered with handsome imitation grain leather. It is a convenient shape to carry, and weighs but 24 ounces. This Brownie takes four, six or twelve exposure Kodak film cartridges, and like the Kodak, loads in daylight. Ask your dealer or write us for a free copy of "At Home With the Kodak," our newest booklet. CANADIAN KODAK CO., Limited TORONTO, CAN.



CAN YOU BEAT THIS? SEND us this ad, together with the special price mentioned below, and we will send you, PREPAID, a beautiful Gaijupure Lence Coat Collar exactly like the above illustration, length 21 inches, width 4 inches, with 4 inches of ivory shade. Examine it carefully in your own home and if you don't find it the best value you ever saw, and worth at least 35c, return it and we will refund your money without question. Our special price 19c. PAQUET'S SPRING BARGAIN Catalogue No. 28 is filled with bargains just as good as this one. We can't print them all in this space. Write for a copy of this Catalogue to-day—it's FREE. THE PAQUET COMPANY LIMITED, Mail Order Department QUEBEC - - - CANADA

STOCK-TAKING SALE OF USED PIANOS

We are preparing for our annual stocktaking at the end of this month and must clear out every piano which is not absolutely new. It makes no difference how little clear an instrument has been, unless it is brand new and a new style at that. **IT MUST BE SOLD BEFORE STOCKTAKING, EVEN AT A SACRIFICE IN PRICE.**

In this list of bargains, every piano but two (the second and third on the list) have been but very slightly used. They are in every way up-to-date in design, quite like new in appearance, tone and mechanism. Most of them were taken in exchange for with them.

They are fully guaranteed the same as new pianos and will be shipped on approval to any point in Canada. If not entirely satisfactory, we will pay the return freight.

Terms of Sale

- Pianos under \$250—\$10 cash and \$6.00 per month.
- Pianos over \$250 and under \$350—\$15.00 cash and \$7.00 per month.
- Pianos over \$350—\$50.00 cash and \$10.00 per month.
- A discount of 10 per cent. for cash.
- A Handsome Stool accompanies each Piano.

MENDELSSOHN—A mahogany upright piano by the Mendelssohn Co., in small size suitable for small apartments. Case of simple but attractive design, with smooth surfaces throughout that are easily kept clean. Seven octaves, double repeating action, 3 pedals, etc. Has been used less than 9 months. Sale Price **\$198**

NEWCOMBE—7½ octaves, cabinet grand upright piano by the Newcombe Piano Co., Toronto, in handsome rosewood case, with plain polished panels. Has full trichord scale, double repeating action, etc. Is in fine order. Original cost, \$375. Sale Price **\$205**

MASON & RISCH—7½ octave upright piano by the Mason & Risch Piano Co., in dark case with solid plain polished panels. Has been rebuilt in our factory, and is in splendid order. Original Cost, \$400. Sale Price **\$210**

EMPRESS—A handsome cabinet grand upright piano made specially for us under our registered name, "Empress Piano." Guaranteed by us as a piano of excellent tone and splendid durability. In mahogany case of simple design. Boston fall board, 3 pedals. Ivory and ebony keys. Is almost new. Special Price **\$235**

MENDELSSOHN—A very handsome cabinet grand upright piano by the Mendelssohn Co., Toronto, in rich, dark walnut case, full length music desk and panels, Boston fall board, ivory and ebony keys, etc., Colonial design. Used less than 15 months. Sale Price **\$255**

CABLE—A very handsome Cabinet Grand Upright Piano, by F. S. Cable, Chicago, in Louis XV. style of case, with full length music desk, Boston fall board, ivory and ebony keys, 3 pedals, etc. Has been used less than a year. Sale price, **\$260**

MCMILLAN—A very handsome walnut cabinet grand upright piano manufactured by us in our own factory, first class in material and workmanship throughout. Has full iron frame, fine double repeating action, 3 pedals, dulciphone or practice muffler, ivory and ebony keys, etc. Used less than a year. Sale price **\$275**

GERHARD HEINTZMAN—A handsome Cabinet grand upright piano by the Gerhard Heintzman Co., Toronto, in richly figured walnut case, with full length plain panels, owner of this piano was only induced to part with it by reason of his desire for a Gourlay-Angelus. Special Sale Price **\$295**

HEINTZMAN & CO.—7½ octaves, full size cabinet grand upright piano by Heintzman & Co., in richly figured walnut case of elegant design. This piano is in every way quite as good as when new, both in tone, and appearance. Special Sale Price **\$295**

COURLAY—An almost new Gourlay piano of Boudoir style, in rich walnut case with full length carved panels, Boston fall board, 3 pedals, etc. This piano throughout is had but a few months' professional use and is a decided bargain at the special price **\$305**

COURLAY—A very beautiful Old English Design Gourlay piano, in rich mahogany. This piano is made without carving, but with the choicely figured mahogany veneer so contrasted as to produce an effect that is exceedingly rich and artistic. The scale of the piano is the New Grand Scale that has won such a phenomenal reputation for the Gourlay amongst musicians in all parts of Canada. It is not often that we are able to offer such a piano at a bargain price. Special Sale Price **\$335**

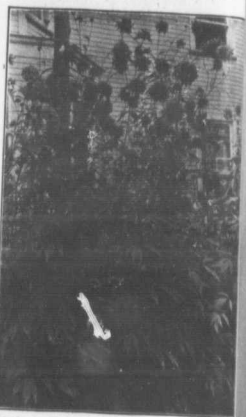
Very Special Bargain

COURLAY-ANGELUS—This is the first time that we have been able to advertise a Gourlay-Angelus player-piano at a bargain. This instrument is the finest model of Goring Lever and other Angelus exclusive devices. This instrument can be used either by means of the Angelus or can be played by hand as desired. The regular price is \$875. Illustrations and further particulars of this exceptional opportunity will be sent upon request. Special Sale Price **\$575**

The Rudbeckia (Golden Glow)

J. McP. Ross, Toronto, Ont.
Its perfect hardiness and the fact that it can be grown almost anywhere added to its easiness of propagation, have made the rudbeckia rather a familiar in some localities. Nevertheless, they are a beautiful class of plants, and an indispensable border-plant.

Its proper place is at the back of the border next to the fence, where its tall spikes of bloom show to advantage. It grows to a height of five to six feet, producing masses of pure yellow double flowers in great freedom—lighting up the neighborhood like a flock of yellow butterflies, and from which ample cuttings can be made for decorative purposes; The variety (Golden Glow) is one most



Golden Glow in Blossom

in cultivation, but there are many other single varieties equally desirable and floriferous.

It is necessary sometimes to tie the clump to a centre stake to prevent the stalks breaking down with the wind, as the abundance of flower blooms make them top heavy in showery or windy weather.

A few plants of rudbeckia make quite a show. They bloom from July to September, and thrive under all conditions of neglect or cultivation.

The best results are obtained when they are given ordinary care. As they are strong growers they require manure annually. When you do not need to plant again, or cannot give the plants away, they may be kept under control by digging surplus growth under.

Timely Suggestions

Spring will soon be with us. Have you made due preparations for it? Have you all the extras ready, such as labels, stakes, flats, cold frames, hotbeds and so forth.

Send for the seed catalogues advertised in Farm and Dairy. Make up your list of seeds and other necessities, and order them in good time. Unless you order early you may find that just the thing you want most have been sold out.

Make hot beds early this month. Use good stable manure, break it up finely and treading it down firmly.

During early March thin and head back ornamental trees and shrubs. All transplanted stock that was moved last fall should be headed back before growth begins. Flowering shrubs that bloom on the new wood can be pruned back hard now to make an abundance of bloom for the spring.

GOURLAY, WINTER & LEEMING

188 YONGE ST. TORONTO, ONT.

into, Ont. and the fact most anywhere of propagation is rather a serious matter. Nevertheless, a very desirable class of plants is obtainable from the back of fence, where to show to ad- height of five fuses of pure a great free- neighborho- utterlies, and sines can be rposes: The is one most

March 2, 1911.

Valuable Garden Hints

A. B. CUTTING, B.S.A., TORONTO The best gardens are those that have been planned beforehand. If you wait until time for seed sowing you may not have time to do just what you would like. Decide now on and order plants and seeds right away.

THE GARDEN HOTBED

Make a hotbed. Prepare the material now. If the manure is fresh from the stable, throw it in a heap for a week or 10 days. Turn it once or twice during that time. Use manure that contains a fair proportion of straw. If the manure is not to be placed in a pit, see that it extends at least one foot around all sides of the frame. Have the manure two and one half feet deep. Trim it well when building, and finish the job neatly. After placing the frame, raise the sash for a couple of days in order to allow surplus moisture to escape. Use about six inches of soil on top of the manure.

The time for starting a hotbed depends upon local climatic conditions. These notes are for Toronto and vicinity. The work is done earlier in the Niagara and Essex peninsulas of Ontario and in British Columbia, and later in other parts of Ontario and in Quebec and the maritime provinces.

SOW PEAS

Sow seeds of nasturtiums, petunias, verbenas, cosmos, lobelia, antirrhinum, salvia and monardella in boxes or pots. Six or eight weeks before it is time to start plants in the open is about the right time to sow most seeds inside.

About the first of March sow a few sweet peas indoors for planting outside when the time comes. Put six seeds in each five-inch pot. By the time you would be sowing seeds outside you will have strong plants three inches or four inches high. When the time comes these plants may be placed 10 inches apart in trenches. When planting knock the ball of earth out of the pot carefully, and do not disturb the roots.

THE KITCHEN GARDEN

Every garden should have an asparagus bed. Start one this spring. The time for sowing vegetable seeds out-doors varies greatly throughout our Dominion with its wide range of climates. As soon as the ground can be worked nicely, sow seeds of peas, spinach, lettuce, parsnips, parsley, leeks and onions. A little frost or snow after these seeds are in the ground will not hurt them. As parsley and parsnips are slow in germinating, often taking four or five weeks, it is a good plan to sow a few seeds of lettuce in the rows with them. Lettuce will come up quickly, and will mark the rows; it will be used before the space is needed for the parsnips. A week or two later, sow beans, beets, carrots and salify. Sow early varieties of radish and of table turnips as soon as possible and at intervals of two weeks for a succession.

Besides growing the standard sorts of vegetables, we do not try something new this year? For a greater variety, sow or plant Brussels sprouts, bush lima beans, Swiss chard, kohlrabi, endive, Chinese mustard, cress and cultivated dandelions. Home-grown rhubarb may be had early by placing a barrel or box, from which the top and bottom have been taken, over a clump in the garden. Cover the top at night and during cold days.

If you are burning wood in the house, save the ashes for use on the garden as a fertilizer. Keep them dry.

FRUIT GROWING

There is no feature of home gardening that is more interesting than fruit growing. If you have no fruit in the garden and have room for them, plant this spring.

Insects and fungous diseases are no respecters of persons. They do not confine their depredations to the orchards and gardens of the commercial growers, but find as congenial conditions and as tasty food in the gardens of farmers and amateurs. To hold them in check we must spray. It is too early this month to do anything more than make preparations. Purchase a knapsack spray pump if your garden is small. A barrel pump is better, however, and will last longer. Three or four neighbors could club together nicely in the purchase of one. If you cannot do the spraying yourself, employ some person to do it. If you do not know what to use consult the articles on spraying that appear on other pages of this issue, and also the advertisements of firms that deal in spraying apparatus and mixtures.

Cure for Scalds and Burns

It may not be generally known that a poultice of raspberry leaves is probably the quickest remedy to relieve bad scalds or burns. During the summer the green leaves will do, or dried ones. We always keep a supply of dried leaves on hand in case of need.

Make a tea of the raspberry leaves by steeping in boiling water for a short time. Pour the hot liquid over some bread and apply it to the scalded or burned surface, as you would a broad and water poultice.

The relief is quick and permanent. By repeating the poultice a few times, the skin under the blistered part is quickly healed. I know of several cases where instant relief has resulted and have never known this remedy to fail. Do not open the blisters. They will open when they are ready. The skin may be raised in blisters, or it may even come off, it matters not, the raspberry poultice eases the burnings and heals the skin, reducing the tenderness. I would be glad were this generally known. —Alice A. Ferguson, York Co., Ont.

Don't forget seeing your friends and having them join in for a club of subscribers to Farm and Dairy.

The Upward Look

Living in Power

"Know ye not that ye are the temple of God and that the Spirit of God dwelleth in you?"—1. Corinthians, 3-16.

There are many professing Christians who are keenly conscious of a lack in their spiritual experience. They lead upright, Christian lives, and they desire to be the means of bringing others into the Kingdom of God, but when the opportunity to speak the word in season presents itself there is that within them which holds them back and which may even make them feel that it would be profanation to make the attempt. Wives often desire to convert their husbands and sons and daughters; fathers, their fathers and brothers; fathers and brothers, their wives and daughters and sisters. Nevertheless, the seal is on their lips, which frustrates all their efforts.

When this is our experience we may know that the fault lies within ourselves. The spirit of God—wonderful thought—dwells within the heart of each true believer. We are to blame if it is not dwelling within us in power. We must have the Spirit of God in power before we can lead others to Christ.

"I firmly believe," said D. L. Moody, "that the moment our hearts are emptied of pride and selfishness and ambition and self-seeking, and everything that is contrary to God's law, the Holy Ghost will come and fill every corner of our hearts; but if we are full of pride and conceit, and ambition and self-seeking and pleasure and the world, there is no room for the Spirit of God. Many a man is praying to God to fill him with power, when he is full already with something else. Before we pray that God will fill us, I believe we ought to pray to Him to empty us. There must be an emptying before there can be a filling. When the heart is turned upside down, and everything is

turned out that is contrary to God, then the Spirit will come in power and fill us with His glory.

"We must have the Spirit of God resting upon us, and then we will have something that gives the victory over the world, the flesh and the devil; something that gives the victory over our tempers, over our conceit, and over every other evil, and when we can trample these sins under our feet, then people will come to us and say, 'How did you get it? I need this power, you have something that I haven't got; I want it.'

"Let us ask God to forgive our sins, and anoint us with power from on high. But remember, He is not going to give this power to an impatient man or woman, He is not going to give it to a selfish man or woman; He will never give it to an ambitious man or woman whose aim is selfish, till first emptied of all worldly thoughts. Let it be God's glory and not our own that we seek, and when we get to that point how speedily the Lord will bless us for good."—I. H. N.

Before it is too Late

If you have a gray-haired mother In the old home far away Sit you down and write the letter You put off from day to day. Don't wait until her weary steps Reach heaven's pearly gate, But show her that you think of her Before it is too late.

If you have a tender message, Or a loving word to say, Don't wait till you forget it, But whisper it to-day. Who knows what bitter memories May haunt you if you wait? So make your loved one happy Before it is too late.

The tender word unspoken, The letters never sent, The long forgotten messages, The wealth of love unspent; For these some hearts are breaking, For these some loved ones wait; Show them that you care for them Before it is too late.

Advertisement for Cummer-Dowsell Limited. Features include: "Dem suah do lighten de wuk" (Aunt Salina's Wash Day Phylisop), Velox Power Washer, New Century Hand Washer, The Warranty Wringer, and The Monitor Rotary Law Clothes Dryer. Text describes the benefits of these machines for laundry work.

OUR HOME CLUB

A Higher Education for Boys and Girls

Dear me! Things do get so muddled. The present all absorbing topic with us is: "Shall the Farmer give his Boys and Girls a higher Education than the Rural Schools provide for?" Some actually say "No." They argue that many sent to the High School or Guelph College turn out more cads, will not work and get a false idea of farm work, are crammed with all sorts of theories that they can not put into practice. It is deplorable that such a sentiment exists, and with the college. All College graduates do not make successful doctors, ministers, lawyers, etc., and very often in many cases the most successful are our own farm boys. There are boys also who would not be anything else but farmers. It is such who would appreciate a course at Guelph would profit by it, not those who are playing at farming. There is a fitness in it and we seem to be so blind to our opportunities. It is putting farming on a poor basis to have a college at the top of the ladder and then say we can get on well enough alone. A working practical knowledge of Botany, Chemistry and Physics, etc., added to experience in farming helps the farmer to get the very most out of life. There are as great wonders as real joys unknown to the uninitiated in his

field of work as wireless telegraphy, electricity, etc., was to the scientist and more than that the successful farmer of to-day must reduce his work to a science and he can't have too much education or he can't have too other profession or work is capable of giving so much real happiness or interest as that of the intelligent farmer, "Nature's Gentleman." Won't some of the Home Club help me out? — "Aunt Faithie."

Housekeepers and Homemakers

What we need just now are fewer "housekeepers" and more "homemakers." That the country can boast of splendid housekeepers unlimited, no one disputes for a minute. The immaculate houses shining from much application of broom and scrubbing brush, the cellars and pantries fairly brimming with eatables galore, and the tired looking women who accomplish all this are eloquent witnesses to the same. Nevertheless there is much room for the home maker, and the chief of her characteristics is the art of simplifying.

As a matter of fact Mrs. A. feels it a burning disgrace if she cannot set before Mrs. B. as great a miscellaneous collection of layer cakes, pies, cookies and tarts as that of which she partook in Mrs. B's house. Therefore to this end she sacrifices all her leisure health, to say nothing of her good looks.

One of these "dandy housekeepers" is apt to receive the suggestion that some of this wholesale pastry baking might be curtailed with scorn. She imagines she would lose caste among her neighbors, and "the men wouldn't like it."

Now as a matter of fact, the average man is an extremely reasonable being. He is as a rule much more likely to be satisfied with a plain, well cooked meal, to be eaten with a neat, good-tempered wife, than in a house arranged to be "lived in," in an "uncomfortably clean" house, mostly reserved for "company," and a tired, dispirited woman though she be the maker of pastry unlimited.

Now, do not for a minute imagine that I do not realize that good food, well cooked, and plenty of it, is an absolute necessity. But a housekeeper who uses a plentiful supply of vegetables, fruit, the simple, easily digested, puddings of rice, barley, tapioca, etc., with all the supply of good rich milk, butter, and eggs which belong to every farm, will find the need of great quantities of pastry greatly minimized, while she has supplied for more healthful diet, with much less labor on her part.

"SISTER."

Aunt Jane's Comments

Where are all the members of our Home Club gone? Surely some of them will be aroused when they read the article: "Why farmers do not marry?" Rob Roy. While I heartily agree with him in some of his ideas I cannot in all things believe he should have satisfied our curiosity by telling us whether he was one of those poor unfortunates who cannot find a wife or not of the fortunate class. He speaks of the girls who had been the school mates of those men being now trained nurses, etc., in some city. He doesn't surely expect the girls to sit around all summer waiting, waiting for some one to ask her to marry. Credit to any girl who will step out with a determination to accomplish something and a good training, especially nursing, will only help any woman to be a better wife than she would be otherwise. I think be. Some farmers are too slow and if they have been rather successful in getting a little money past them they are afraid a wife would spend it too freely. It is true "this not the house that makes the home but the love that is within," and I believe the man and wife who marry and are obliged to economize and gather appreciate their home far more than the couple who start where father and mother left off. Wake up you farmers, there are lots of good women left yet and you know Leap Year only comes once in four— "Aunt Jane."

THE COOK'S CORNER

Recipes for publication are requested. Inquiries regarding cooking, recipes, etc., gladly answered by request, to the Household Editor, Farm and Dairy, Peterboro, Ont.

ROLLED OATS AND FRUIT.

Make a porridge in the usual way, but sweeten slightly, and turn into buttered cups. Set away to cool, and then turn out into individual oatmeal dishes. Pour peach preserves over each one and serve with whipped cream.

CHERRY JELLY.

Put the cherries, not fully mature, in a crock and let stand on the back of the stove or in a slow oven till all juice is extracted. Then strain and measure. Measure this and allow 1 lb. sugar for each pt. of juice. Heat the juice and sugar separately, then boil together about 20 minutes, or until it jellies. Nice jellies may be made by using equal parts of cherries and currants, or equal parts of cherries and raspberries. One old recipe calls for equal parts of cherries, strawberries, raspberries and currants.

POTATO SALAD.

Season a pint of cold boiled and sliced potatoes with salt, pepper, mustard and chopped onions. Over this pour a dressing made as follows: Cut about 3 slices of bacon in large dice and fry brown, then add 1 tablespoon flour. Stir till smooth and add boiling water to make it the consistency of thick cream. Let this cook about 5 minutes, then add vinegar to suit taste, salt, and 1 teasp. sugar. Pour over the potatoes and serve hot.

APPLESauce CAKE

One cup sugar, ½ cup butter, 2 cups flour. In another vessel have 1 large cup apple sauce, ½ cup raisins, ½ cup currants, ½ cup black molasses, 1 teasp. cinnamon, 1 teasp. cloves, a little nutmeg, pinch of salt. Mix well, add to the other ingredients. Bake for at least ½ of an hour in a moderate oven. You will note eggs are not used in this cake, neither is there any milk required.

The Sewing Room

Patterns to suit each. Order by number and size. If for children, give age; for adults, give bust measure for bodice, and waist measure for skirts. Address all orders to the Pattern Department.

CHILD'S DRESS, 6887



Guimpe frocks are the prettiest for little girls. The yoke, or body portion, is cut in one with short sleeves, and is exceedingly simple in making. This one is finished with scalloped edges. It can be left plain and trimmed to suit the fancy.

For a girl 6 yrs. is required ½ yds. of material 27 in. wide, 2½ yds. 36 yds. 44 in. wide.

The pattern is cut in 3 sizes of 4, 5 and 8 yrs.

ONE-PIECE BLOUSE 6894



Here is a simple, attractive blouse that can be treated in several ways. In this case it is made over a guimpe lining but it can be made without lining and either with or without a yoke. When made with the yoke waist adapts to dressy occasions.

For the 16 yr. size is required 1½ yds. 27 in. wide or 1½ yds. 36 or 44 in. wide with ½ yds. of silk 27 in. wide for the trimming portions, ¾ yd. of silk.

The pattern is cut in 3 sizes of 14, 16 and 18 yrs. of age.

THREE OR FOUR-PIECE SKIRT, 6891



This skirt is practical as well as in style. It can be made with a waist at the centre front and so be cut from narrow material with 10 or 12 pieces or joinings, or it can be made with the centre front. If cut from wide material the front and back portions and seeming so hold them to the panels make an effective treatment.

For a medium size is required 5½ yds. wide with 1½ yds. of any width for the panels.

The pattern is cut for 22, 24, 26, 28 and 32 in. waist measure.

Pattern for a Jack Rabbit

All children are fond of animal toys. This one is very easy to make, soft and all ready to play with while it will mean a great many happy hours for the little folk. The soft, woolly material can be utilized, and for the stuffing excelsior, cotton or bran can be used, but in this case bunny is made of white cotton flannel.

To make the rabbit will be required ½ yard of material either 27 or 44 inches wide.

The pattern is cut in one size only and will be mailed on receipt of 10 cents.

CARE IN ORDERING

Be sure and state size, also number of patterns. Do not send illustrations of patterns. Order by number and size only. Your address is also quite necessary.

Here's a Home Dye

That ANYONE Can Use.



HOME DYING has always been easier of a difficult undertaking—Not so when you use

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ONE FOR ALL KINDS OF WOOL

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Peterboro - Ont.



Room

Order by number, give age, sex, weight and address all items.

687

po frocks are best for little girls. The yokes are fully portion, with sleeves, and are neatly simple in design. This one is made with wool.

edges. It can be plain and to suit the taste of a girl 6 yrs. and up. Yoke, 27 in. long, 2 1/2 yds. 36 yds. wide. Pattern is cut in size of 4, 6 and 8.

684

as a simple blouse is treated in the same line. It is made of guinea lining with a yoke, with the yoke and sleeves to occasions.

is 36 3/4 size and 1 1/2 yds. wide. It is for 4 in. wide of silk 27 for the trimmings, 3/4 yds. of lace. Pattern is cut in size of 14, 16 and 18.

is 65. It is practical as well as can be made in the front and so narrow with a button joining.

made with the button, if cut in the front, it will be a simple attachment of buttoned over and back and securing them to the skirt as an attachment.

is 5 1/2 yds. wide. It is for the waist for the 4, 56, 28, 30

is 3 1/2 yds. wide. It is for the waist for the 4, 56, 28, 30

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"Why, It Looks Like A New Room"

That's what everybody says when you decorate your home with Muresco.

Its soft and delicate tints turn a room with dingy walls and ceilings into a place of charm and beauty.

Muresco is an artistic wall finish that can be applied direct over smooth, hard plaster surfaces, or over metal or hardwood. It comes in many tints and shades, and it can be applied by anyone.

MURESCO For Walls and Ceilings

Muresco is used in thousands of artistic homes. It gives a restful background for pictures and wall decorations. Decorative effects may be produced by stencils which we furnish.

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We are makers of a large line of paints and varnishes for every purpose—sold ready to use. Moore's House Colors touch the highest quality possible in paint-making.

BENJAMIN MOORE & CO. Brooklyn, N. Y. Carteret, N. J. Cleveland, O. Toronto, Can. Chicago, Ill.

Device for Gathering Brush

An implement that greatly facilitates the work of hauling and piling brush from an apple orchard was described recently to an editor of Farm and Dairy by Mr. W. F. Kidd, of Simcoe, Ont. A sketch of the device is reproduced herewith.

The device consists of two poles about 14 feet long, held together by three rounds. The poles at one end are placed at such a distance apart as is convenient for a man to hold them not unlike plow handles. The other ends of the pole are placed five feet apart. A rather round is placed in the centre. The other rounds are placed one each on either side of the centre round about 3 1/2 feet from it. A logging chain is attached to the centre round from the top, and to this chain, which should be of considerable length, the team is hitched. To raise up the brush, a man takes the poles in hand, raising the one end to a convenient height, about 2 1/2 or three feet from the ground,

while another man drives the team down between the trees where the brush lies.

The brush packs in between the poles and the chain in tight sheaves. The fire should be going soon after the start. The team may be driven up close to it and the whole rakeful dumped right on to the fire. Those who have used this device for raking brush claim that it is surprising how readily it burns when hauled and piled in this manner.

Renting Orchards in Lambton County

(Continued from page 15) we found men on all sides willing to turn their orchards over to our care. We were careful, however, to secure orchards of good winter varieties, which had not deteriorated so far as not to respond immediately to good care.

WHY THEY LEASED THEIR ORCHARDS

Most of the men with whom we had talked the matter over, fully realized that they did not have the time to give their orchards proper care; that without care it was a mere encumbrance of the land; that they had not made a study of orchard requirements, and therefore did not know how to get best results. They were not acquainted with the habits of injurious fungus and insect pests, and could not successfully control them. They realized that through neglect a rapid depreciation in the value of the orchard was taking place, and that the only way by which its present value could be maintained or increased was by giving it into the hands of a specialist.

Since orchard pests have become so prevalent, and with the markets of the world more exacting as to quality, it is utterly impossible to secure profitable returns from neglected orchards. But quite the reverse is true where scientific methods of apple production are followed.

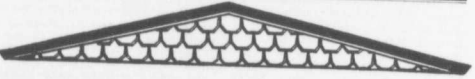
WHAT IS A FAIR RENTAL?

There can be no definite rules laid down as to what is a fair rent per acre for all orchards, as there is a vast difference in the earnings power of different orchards, according to varieties, conditions, and so forth. Some of the principal factors to be considered by the renter are varieties, condition of the trees, condition of the soil as regards fertility, whether trees are high or low headed. High trees require much more labor in the way of spraying and packing than the low headed ones.

In some cases orchards are rented for a number of years at a given amount per year. Other farmers prefer to let on the share plan. The renter taking over the entire management of the orchard, doing all labor and taking all expense of growing and harvesting the crop until it is laid on the ground. The renter

then claims two-thirds of the entire crop for his share, thus leaving one-third to the owner as a rent for his orchard. It is agreed, also, that the owner's third is to be taken by the renter at a given price per barrel. In this way there is little reason for dispute between owner and renter.

Where reasonably good orchards can be secured on the foregoing terms, there is a grand opportunity for the would-be apple grower to engage in a profitable business without buying an orchard, and at the same time make unprofitable orchards yield good returns to the owners.



How "Eastlake" Steel Shingles will save you money



Talk No. 7

Galvanizing

By The Philosopher of Metal Town

There is only one way to galvanize shingles properly.

Extravagant claims made by some manufacturers simply mean that their product is inferior.

"Double" galvanizing would chip off, leave the metal bare, and do more harm than good.

The "Eastlake" process means that every plate is pickled, scoured and cleansed before galvanizing.

No roughness, rust or dirt can adhere to the metal, thus it is impossible for the galvanizing to scale or peel off.

"Eastlake" Steel Shingles are galvanized once, and only once.

"Eastlake" Steel Shingles are best for all buildings—the only roofing proven permanent by an actual test—in perfect condition after 25 years of wear—fireproof, lightning-proof and stormproof.

Use "Metallic" Corrugated Steel for barn siding, implement sheds and granaries. It is easily erected, absolutely weatherproof and economical—no wood sheathing required—simply nail to framework.

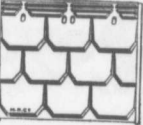
Let us send you our illustrated booklet, "Eastlake Metallic Shingles," also booklet containing all these talks. Write to-day—a post-card with your name and address.

Manufacturers of Metallic Building Materials

The Metallic Roofing Co.

LIMITED Toronto - Winnipeg A66

"EASTLAKE" STEEL SHINGLES

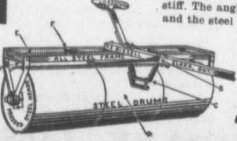


Agents Wanted in Some Sections

The "Bissell" is unbeatable for crushing stiff, lumpy soil

The "Bissell" land roller will pack your soil better than you've ever had it done before. Its heavy steel plate drums are riveted together every two inches. The pressed steel heels keep the drums absolutely stiff. The angle steel cross braces and the steel plate bottom in the frame make the frame perfectly rigid. It's this exceptional stiffness that makes the "Bissell" un-

beatable for crushing stiff, lumpy soil. It runs easily, too. It has large 12 inch rollers for bearings at ends of the roller. The centre drum, which supports the heavy two-inch axle, makes the "Bissell" easier to turn at the ends of the field. The Draw Bracket permits low hitch. There is no neck weight on this "Bissell." Of course, such a superior roller is widely imitated. So, for your protection, be sure and see that the "Bissell" name is stamped on the roller you buy. No other is the genuine "Bissell." You can have the "Bissell" Land Roller in 6, 8, 9 or 12 ft. length, and with Grass Seeder Attachment. Ask Dept. B for roller catalog.



T. E. BISSELL Co., Ltd., Elora, Ont.

Hardy Fruits For Cold Climates

(Continued from page 11) Pears are not successfully grown north of latitude 45 degrees except in some favored localities and along the lower St. Lawrence. The Flemish Beauty is the hardiest of the better varieties and is one recommended to those who wish to try pears. This variety succeeds very well in favored situations on the Island of Montreal and along the Ottawa River. It has not been proven sufficiently hardy at Ottawa. The Russian varieties, though hardy, are of inferior quality and subject to fire blight.

Cherries, like European plums, are not hardy enough for the north except near large bodies of water where the air is not so dry as it is more inland. They thus do very well along the lower St. Lawrence. At Ottawa

the flower buds are usually killed. Those which bear crops more frequently, and hence may be considered the hardiest, are Orel 25, which appears to be the most hardy, Minne-Ostheim, Geriso, d'Ostheim, Vladimir, and Orel 24. Montmorency is good, but is not quite as hardy in the flower bud as the others.

At the Experimental Farm, Ottawa, there have been nearly 200 varieties of grapes tested. Many of the varieties only ripen when the season is especially favorable, while others ripen every year. The latter are success in the north, and among the earliest of these are: Red—Winechell; white—Golden Drop, Winechell (Green Mountain); black—Brant, Canada, Manito, Peabody, Daisy, Jewel, Moore's Early.

Where the climate is as favorable as that at Ottawa, the best kinds to

plant are: Black—Early Daisy, Manito, Moore's Early, Worden and the white—Winechell, Diamond; red—Moer, Brighton, Delaware, Lindley.

In order to grow grapes successfully in the north they should be planted where they will get the greatest heat in summer; the vines should be covered with soil in the winter, and the covering should be left on as long as possible in the spring so that they will escape the spring frosts.

The Black Cap Raspberries do not succeed very well in the north, but two of the hardiest are Older and Hilborn. A promising new variety is the Gibraltar. Some of the hardiest and best red varieties are the King, Marlboro, Herbert and Clarke, the Herlet is considered the best, and the King the hardiest. The Cuthbert which is the standard in warmer

parts of the country is rather tender for northern districts.

CURRANTS AND GOOSEBERRIES

Some of the hardiest red varieties of currants are Penman, Victoria, Red Dutch, Ruby Castle, and of the black varieties, Saunders, and of the Collins' Prolific and Lee's Prolific. Are: Downing, Pearl, and Red Jambalike, are green varieties, and the latter is a red one. Houghton, though not so large, is hardier than any of them.

STRAWBERRIES

The best varieties of strawberries for the most northerly districts are: Bedeword, Senator Dunlap, Splendid, Lovest and Crescent, the last one being perhaps the hardiest. The Haverland has also done well in the north.



Free to Stock and Poultry Raisers

We will send, absolutely free, for the asking, postpaid, one of our large thirty-two-page booklets on the common diseases of stock and poultry. Tells you how to feed all kinds of heavy and light horses, colts and mares, milch cows, calves and fattening steers, also how to keep and feed poultry so that they will lay just as well in winter as in summer. No farmer should be without it.



At a cost of only two-thirds of a cent a day per Animal, Royal Purple Stock Specific makes each Animal worth 25 per cent. more.

You never heard of any other Specific, or "Stock Food," doing likewise.

Royal Purple will permanently cure the Bots, Colic, Worms, Skin Diseases and Debility, and restore run-down Animals to plumpness and vigor.

It will increase the milk-yield three to five pounds per cow a day inside of three to three weeks. It makes the milk richer than ever before.

MR. ANDREW WEGRICHT, of Wainlett, Ont., says: "This is to certify that I have tried your Royal Purple Stock Specific for two weeks, on one cow, on the 16th I weighed her milk as 17 pounds. I noticed a change after 5 or 6 days, as there was an extra weight of milk. On the 29th, I carefully weighed the milk, and she gave 22 pounds. I am giving an order for 5 boxes, as I consider it the best I have ever used."

"Stock Food" will not do this. Because "Stock Food" is nothing more or less than a mixture of the very things which you, yourself, grow on your own farm.

It is not more food your Animals need. They must have something to help their bodies get all the nourishment from the food they are getting. So that they will fatten, and stay fat, all the year round. They need something to prevent disease, to cure disease, and to keep them in the best of health, all the time.

Not a Stock Food

Royal Purple is not a "Stock Food," nor a "medicine." It is a Conditioner.

It does not contain Grain, nor farm products. Nor does it contain "Hops," or any other injurious ingredients. Royal Purple does not merely temporarily help or inspire the Animal. It fattens and strengthens it, permanently.

No other Specific known adds flesh so quickly as Royal Purple. It makes 6-week-old Calves as large as ordinary-fed Calves are at 10 weeks.

Royal Purple makes naturally-thin Animals fat

and heavy. And it builds up the health and restores the former plumpness and vigor of run-down stock, in little or no time.

The very best time to use this Conditioner is NOW. It digests the hard food properly and prevents the animals getting indigestion or losing flesh.

50 per cent. Cheaper

One 50-cent Package of Royal Purple will last one Animal 70 days. This figures a little over two-thirds of a cent per day.

Most "Stock Foods" in 50-cent Packages last but 50 days, and are given three times a day.

But Royal Purple Specific is given only once a day, and lasts 50 per cent. longer. (A \$1.50 Pall, containing four times the amount of the 50-cent Package, lasts 280 days.)

So, you see, it is only necessary to give Royal Purple Specific once each day. Just think of making each Animal worth 25 per cent. over its cost! What will that mean to you, Mr. Stock Owner!

Royal Purple STOCK AND POULTRY SPECIFICS

Royal Purple creates an appetite for food, and helps nature to digest and turn it into flesh and muscle.

As a Hog fattener, Royal Purple has no equal.

Never Off Feed

Dan McEwen, the horseman, says: "I have used Royal Purple Stock Specific persistently in feeding 'The 2nd,' 2,024, largest winner of any pacer on Grand Circuit in 1908 and 1909, and 'Henry Winters,' 2,104, brother of 'Allen Winters,' winner of \$36,000 in trotting stakes in 1908.

"These horses have never been off their feed since I started using Royal Purple Specific. I will always have it in my stables. Your Cough Powder works like magic."

For Poultry

Royal Purple Poultry Specific is our other Specific. It is for Poultry—not for stock.

It makes the Hens lay Eggs in Winter as well as in the Summer.

MRS. WM. BURNHAM, Sanford, Ont., says: "I have used two boxes of your Poultry Specific for my hens. They laid so well while feeding it to them, I wondered if you would mind sending me winter. I bought it from your agent last year. I had 82 hens, and some days I got two dozen eggs a day in February and March, while feeding them the Specific."

Royal Purple Poultry Specific prevents Fowl's lung flesh at moulting time, and permanently cures fowl's poultry disease. It makes their plumage bright and keeps it always in prime condition.

It makes your Poultry worth more than they could ever be without it.

Yet one 50-cent Package will last 25 Hens 280 days. Or a \$1.50 Pall will do more material at only three times the cost.

Make This Test

Every ounce of Royal Purple Stock and Poultry Specific is guaranteed.

To prove that Royal Purple has no equal, we want you to make this test:

Feed Royal Purple to any one of your Animals for four weeks. And at the same time feed any other preparation to any other Animal in the same condition.

If Royal Purple does not prove to you, by actual results, that it is the best you ever used, we'll return your money.

And we'll ask no questions—make no excuses. You will be the judge—not us.

This is an honest test, isn't it? We ask you to make the test, because we know that Royal Purple is the best Conditioner on the market.

If you are not satisfied, after testing it, you don't lose anything, do you?

Centralla, Ont., Feb. 7, '10.

The W. A. Jenkins Mfg. Co., London, Ont. Gentlemen,—We have been using Royal Purple Poultry and Stock Specific for the last three months, and must say that the results are remarkable. Am feeding the Stock Specific to two milking cows, and they have increased 30 per cent. in their milk. The Poultry results are even more marked than this. We have about 50 hens, laying age. When we commenced feeding, we were getting five and six eggs a day, and in the last five days the same flock of hens laid 150, or those five an average of 31 each day, and those five days have been the coldest this winter.

You can see results plainly in two or three days after the use of "Royal Purple," and the poultry have the same hustle and appearance now as in the summer time. With cows and poultry, am using exactly the same food and care as before starting to feed "Royal Purple." When farmers and stockmen get acquainted with Royal Purple, it will have a greater demand than all other tonics and stock foods on the market combined. Yours truly, ANDREW HICKS.

Aug. 28, 1910.

W. A. Jenkins Mfg. Co., London, Ont. Gentlemen,—The Fall we had in our stables a young mare belonging to Miss Clouston, of Montreal. We could not feed her any bran on account of causing violent scouring, consequently causing her to become weak and thin. We commenced using your Royal Purple Stock Specific, and the results were wonderful. After using it three weeks, we found we could feed the animal bran or any other soft feed without scouring her, and she actually took on in this time three pounds of flesh, we working her at the same time through the hunt. I can heartily recommend your Stock Specific. Yours truly, TOM SMITH.

Trainer for the Hon. Adam Beck.

We also manufacture:

- Royal Purple Lice Killer..... 25c.
Royal Purple Gall Cure..... 25c.
Royal Purple Sweat Lintiment..... 50c.
Royal Purple Cough Cure..... 50c.
Our Cough Cure will cure any ordinary cough in four days, and will break up and cure distemper in ten to twelve days.
If your dealer cannot supply you with our Royal Purple Brands, we will supply you upon receipt of \$1.50 a pall, per pound, for either poultry or stock, if you want any Lintiment, Gall Cure or Cough Powder, we will send it by mail, postpaid, upon receipt of price.





OUR FARMERS' CLUB
Correspondence Invited

QUEBEC

MISSISSQUOI CO. QUE.
FRELIGHTSBURG, Feb. 13.—February has been a stormy month. There have been heavy snow falls and the wind has made it up well on the roads so it is difficult to travel on them with heavy loads, where they have been plowed. A neighboring farmer has been experimenting with specially constructed rollers for making winter roads. They make a wide smooth path over which the snow will blow, and roller makes a good road and it would be interesting to know which is cheaper, plowing or rolling.—G.A.W.

ONTARIO

LEEDS CO. ONT.
GANANOQUE, Feb. 15.—We are having a very cold winter in this section. Feed is cheap, hay selling from \$8 to \$9 a ton. A good deal has been pressed and going for \$70. Cows are very dear, grades butter, 25c; and eggs, 35c; packed eggs, 25c.—C.H.G.

FRANKVILLE, Feb. 22.—We are having one of our old fashioned Canadian winter snow. However, people seem to be enjoying it. Farmers says that live stock has consumed a great deal of feed, but there will be plenty, as only a very few have considerable hay to sell. Hay will range from \$8.00 to \$10.00 a ton. Pork is very scarce and very firm in price. Horses are in good demand at good prices. Auction sales are numerous, and all kinds of live stock sell well, particularly milk cows and sheep.—W. H. M.

PETERBORO CO. ONT.

MONAGHAN, Feb. 21.—A good many farmers in this township are thoroughly disgusted over the publicity the town has received. They have a petition sent to the Canadian Manufacturers' Association, claiming that 90 per cent of the farmers in this township are opposed to free trade with United States. A petition to that effect was circulated and signed by a good many farmers in this township. The committee under which this was done are worth recording. Last summer, before the agitation for free trade with United States had started, a Mr. Watson Griffin, a former employee of the Canadian Manufacturers' Association, went through this township "Peterboro Review" conservative paper, and stating that they desired to find the farmers' views in regard to free trade busy in the fields they did not stop to it to get rid of him. It is reported that he was paid 10 cents for each signature he received. Later he gave up the signature and turned it over to another party, who secured additional signatures. A good many of our farmers are kicking themselves hard because they were so foolish as to sign the petition. It is quite probable that three-quarters of them would have signed the petition had they appreciated what it meant, or the purchase, a good many did not sign it. We venture to say that a considerable majority of the farmers in this county are strictly in favor with free trade with United States.—B. C.

BRANT CO. ONT.
FALKLAND, Feb. 14.—Our Farmers' Institute held two very successful meetings during twelve months.

here on Feb. 3. Mr. Hallman of Brant, Mr. Hiebles of Burford and Miss Gray of Toronto, all imparted much valuable information. The market for wheat is still dull at 85c. The market for barley is very active in strong demand; turnips 15c and bush; hay \$7.25. There is a good demand for lambs at \$6.00. Butcher are buying their supplies from the packing companies.—L.T.

WATERLOO CO. ONT.

WATERLOO, Feb. 22nd, 1911.—We are having fine winter weather and good raising. Hired men are being bought up for the summer. A lot of horses have changed hands at good prices. No fat having been sold as we are still waiting for better prices. A number of very successful auction sales have been held. Now is the time to clean the seed grain.—A.H.S.

OXFORD CO. ONT.

GOLAPLE, Feb. 17.—The weather has been changeable. We had a heavy storm on the sixth and a few days after a thaw, parts of the roads are bare, and some are icy and no wheeling. There is a slight improvement in the market for horses, no prospect of low prices, the market is up to \$30 according to quality. Eggs are up to 25c. There is plenty of feed. Some farmers could keep more stock but stock they have to transport the straw down. The Institute meetings are over.—A. M. McD.

MANITOBA

MARQUETTE DIST. MAN.

KELLOGG, Feb. 20.—We have had two weeks of lovely weather. Farmers are producing the meanest weather Manitoba has ever known. It is a fact that residents claim they never knew it being so cold and stormy combination, which makes a very bad day for the farmer. The market for cattle doesn't seem to be soaring very high. Cattle are wearing low, but the demand is good for clear feed. Cattle have been made for first of May delivery as high as 6c. cents. The farmers will be bailing and shipping hay and getting ready for the winter. The traffic in freight moving down. There is a lot almost completely tied up for about a month.—L.J.N.

BRITISH COLUMBIA

NEW WESTMINSTER DIST., B.C.

CHILLIWACK, B.C., Feb. 1, 1911.—The weather continues to be mild with frequent Chinook winds. There is six inches of snow on the level and in many places it is drifted very deep. The pheasants are suffering in this weather as their sources of food are shut off and they take the coldest weather we have had in seven degrees below zero.

GOSSIP

One of the greatest problems confronting the farmer to-day is how to get his farm done, the better and more profitable while his farm. In view of the fact that farmers have been handicapped a great deal by not being able to get tile when they have time to haul it, it often has a tendency to cause this very important item to be put off from time to time. Cement tile product and it has been proven by the expert and it can be made right home, and can be made right home. The Farmers' Cement Tile Machine Co. of Walkersville, Ont. have a machine on the market for this purpose. It will pay anyone who uses tile to get in touch with them.

The most nervous animal on the farm is the well bred Milch Cow and to get the best out of her she must be comfortable, contented and clean. Look how happy the cows in the above cut are, in Louden's Stalls and Stanchions. The Louden Machinery Co., Guelph, makes everything for a barn or stable. Write for catalogue, it is free for the asking.

Defy lightning as well as storms
You can defy lightning, so far as it affects your buildings, when you roof with Preston Shingles. For with them you get a GUARANTEE against harm to any building they cover from the thunderbolt. And they protect you against all kinds of weather as well.
YET these better-galvanized (therefore longer-lived) metal shingles cost you not a cent more per hundred square feet than you must pay for the ordinary kind. And even that ordinary kind is worth far more than wood shingles—or slates—of the (so-called) patent roofings.
PRESTON SAFE-LOCK SHINGLES
You should be well-advised about roofings
Allow us to send you a book that tells the mere truth about every sort of roofing material there is. It is free. You would gladly pay for it if you know what it would save you—in money, bother and time. But it's yours for the asking.
Please ask for that book. Do it now. It tells, among other things, why the all-square lock makes bigger roofs. Write and Ask Questions!
G. Dalph Metal Shingle and Siding Co., Limited
Dover St. Factory, Preston, Ont., and Montreal.

BREEDER'S DIRECTORY

- Cards under this head inserted at the rate of \$4.00 a line per year. No card accepted under two lines, nor for less than six months, or 12 insertions during twelve months.
- SUNNYSIDE HOLSTEINS.—Young stock, all ages.—J. M. Monts & Co., Stansted, Quebec.
 - CLYDE HORSES, SHORTHORN CATTLE.—Young stock for sale at all times.—R. Redmond, Peterboro, Ont.
 - CLYDEDALE HORSES, SHORTHORN CATTLE.—Large selection of best stock. Prices reasonable.—Smith & Richardson, breeders and importers, Columbus, Ont.
 - EDMONT HOLSTEINS AND TANKWORTH.—Young stock for sale. Quality good, prices reasonable.—George H. McKenzie, Thornhill, Ont.
 - OMERS GRANGE STOCK FARM, OMBSTOWN, P. QUEBEC.—Importation and breeding of high class Clydesdale especially. Special importations will be made.—Duncan MacIsaac.
 - RIDGEDALE HOLSTEINS.—For full particulars in regard to stock and prices, address W. W. War, Ulton, Ont.
 - YORKSHIRE AND TANKWORTH HOOGS.—Plymouth Rock and Orington fowl.—A. Dym, 454 Parkdale Ave., Ottawa.
 - HANSHIRE PIGS.—Canada's champion pigs and best breeders. Sows three months and under.—Hastings Bros., Cross Hill, Ont.
 - CLYDEDALES.—Many by that great sire James R. M. Write to E. M. Holtby, Manchester P.O., and G. M. Holtby, Verile C.P.F. Long Distance Phone.
 - TANKWORTH SWINE.—Choice stock for sale at all times at reasonable prices. Correspondence invited.—Wm. Keith & Son, Listowel, Ont.

Branch Office and Factory, Montreal, Que.

MARKET REVIEW AND FORECAST

allman of Br... and Miss Gray... for wheat... and... for... a good... butchers... in the packi...

Toronto, Monday, February 27th.—Wherever one sees a bunch of men talking together now-a-days, it can almost be granted that they are discussing the proposed trade agreement with the United States. Attacks on the agreement... have almost entirely ceased. Manufacturers are hardly affected at all by the agreement while the farmers of the country are so evidently not so.

The most strenuous objection to the trade agreement on the other side is coming from the United States farmers and it is being taken away. While their protection is being taken away, they must remain practically the same. Where duties are reduced all around them they would be as hurt as the Canadian farmer.

Business comes as usual... of this report a good showing... of the coming year. Call money rates at 5%.

WHEAT.—The wheat has all had their own way in it. About this time the price ruled steady at last week's decline up to 97c for No. 1 Northern... water mark for wheat for three years.

COARSE GRAINS.—The demand for barley at unusually high prices is still the feature of the market. Peas and rye... have declined slightly in the market... Quotations on the Toronto market are as follows: Oats, No. 2, 37c; No. 3, 36c; No. 4, 35c; No. 5, 34c; No. 6, 33c; No. 7, 32c; No. 8, 31c; No. 9, 30c; No. 10, 29c; No. 11, 28c; No. 12, 27c; No. 13, 26c; No. 14, 25c; No. 15, 24c; No. 16, 23c; No. 17, 22c; No. 18, 21c; No. 19, 20c; No. 20, 19c; No. 21, 18c; No. 22, 17c; No. 23, 16c; No. 24, 15c; No. 25, 14c; No. 26, 13c; No. 27, 12c; No. 28, 11c; No. 29, 10c; No. 30, 9c; No. 31, 8c; No. 32, 7c; No. 33, 6c; No. 34, 5c; No. 35, 4c; No. 36, 3c; No. 37, 2c; No. 38, 1c; No. 39, 0c; No. 40, 0c; No. 41, 0c; No. 42, 0c; No. 43, 0c; No. 44, 0c; No. 45, 0c; No. 46, 0c; No. 47, 0c; No. 48, 0c; No. 49, 0c; No. 50, 0c; No. 51, 0c; No. 52, 0c; No. 53, 0c; No. 54, 0c; No. 55, 0c; No. 56, 0c; No. 57, 0c; No. 58, 0c; No. 59, 0c; No. 60, 0c; No. 61, 0c; No. 62, 0c; No. 63, 0c; No. 64, 0c; No. 65, 0c; No. 66, 0c; No. 67, 0c; No. 68, 0c; No. 69, 0c; No. 70, 0c; No. 71, 0c; No. 72, 0c; No. 73, 0c; No. 74, 0c; No. 75, 0c; No. 76, 0c; No. 77, 0c; No. 78, 0c; No. 79, 0c; No. 80, 0c; No. 81, 0c; No. 82, 0c; No. 83, 0c; No. 84, 0c; No. 85, 0c; No. 86, 0c; No. 87, 0c; No. 88, 0c; No. 89, 0c; No. 90, 0c; No. 91, 0c; No. 92, 0c; No. 93, 0c; No. 94, 0c; No. 95, 0c; No. 96, 0c; No. 97, 0c; No. 98, 0c; No. 99, 0c; No. 100, 0c.

MILK FEEDS AND MEALS.—Supplies of mill feeds are scarce on the Toronto market and prices rule firm. Quotations on the Toronto market are as follows: Corn meal, No. 1, \$2.10; No. 2, \$2.05; No. 3, \$2.00; No. 4, \$1.95; No. 5, \$1.90; No. 6, \$1.85; No. 7, \$1.80; No. 8, \$1.75; No. 9, \$1.70; No. 10, \$1.65; No. 11, \$1.60; No. 12, \$1.55; No. 13, \$1.50; No. 14, \$1.45; No. 15, \$1.40; No. 16, \$1.35; No. 17, \$1.30; No. 18, \$1.25; No. 19, \$1.20; No. 20, \$1.15; No. 21, \$1.10; No. 22, \$1.05; No. 23, \$1.00; No. 24, \$0.95; No. 25, \$0.90; No. 26, \$0.85; No. 27, \$0.80; No. 28, \$0.75; No. 29, \$0.70; No. 30, \$0.65; No. 31, \$0.60; No. 32, \$0.55; No. 33, \$0.50; No. 34, \$0.45; No. 35, \$0.40; No. 36, \$0.35; No. 37, \$0.30; No. 38, \$0.25; No. 39, \$0.20; No. 40, \$0.15; No. 41, \$0.10; No. 42, \$0.05; No. 43, \$0.00; No. 44, \$0.00; No. 45, \$0.00; No. 46, \$0.00; No. 47, \$0.00; No. 48, \$0.00; No. 49, \$0.00; No. 50, \$0.00; No. 51, \$0.00; No. 52, \$0.00; No. 53, \$0.00; No. 54, \$0.00; No. 55, \$0.00; No. 56, \$0.00; No. 57, \$0.00; No. 58, \$0.00; No. 59, \$0.00; No. 60, \$0.00; No. 61, \$0.00; No. 62, \$0.00; No. 63, \$0.00; No. 64, \$0.00; No. 65, \$0.00; No. 66, \$0.00; No. 67, \$0.00; No. 68, \$0.00; No. 69, \$0.00; No. 70, \$0.00; No. 71, \$0.00; No. 72, \$0.00; No. 73, \$0.00; No. 74, \$0.00; No. 75, \$0.00; No. 76, \$0.00; No. 77, \$0.00; No. 78, \$0.00; No. 79, \$0.00; No. 80, \$0.00; No. 81, \$0.00; No. 82, \$0.00; No. 83, \$0.00; No. 84, \$0.00; No. 85, \$0.00; No. 86, \$0.00; No. 87, \$0.00; No. 88, \$0.00; No. 89, \$0.00; No. 90, \$0.00; No. 91, \$0.00; No. 92, \$0.00; No. 93, \$0.00; No. 94, \$0.00; No. 95, \$0.00; No. 96, \$0.00; No. 97, \$0.00; No. 98, \$0.00; No. 99, \$0.00; No. 100, \$0.00.

POTATOES AND BEANS.—Trade in potatoes has been brisk, prices ruling steady at last week's decline. Quotations range from \$1.10 to \$1.15 a bush. On the other hand, the market for beans has suffered a further drop from the decline of the week previous. The trade is brisk for beans are \$1.90 for primes and \$2 a bush, for hand picked.

EGGS AND POULTRY.—The egg market has steadied down again and while there were reductions this past week, they were hardly

large enough to be appreciable. The rapid reductions caused by the unloading of cold storage stock have again helped itself for the present at least. The cold storage stock now being unloaded grades of eggs are quoted at 35c to 40c for No. 1 and 30c to 35c for No. 2 and 25c to 30c for No. 3. On the farmers' market strict No. 1 old eggs are quoted at 30c to 35c and No. 2 old eggs at 25c to 30c and No. 3 old eggs at 20c to 25c. On the farmers' market strict No. 1 old eggs are quoted at 30c to 35c and No. 2 old eggs at 25c to 30c and No. 3 old eggs at 20c to 25c.

HORSE MARKETS.—Trading in horse exchange is very anxious to sell and the prices they are asking are not opening up so briskly as the high prices former years probably due to the fact that the market is not so open to demand. Quotations are as follows: Medium weight, \$120 to \$200; fair quality, \$80 to \$120; poor quality, \$40 to \$80. Drivers, \$150 to \$200; drivers, \$100 to \$150.

LIVE STOCK.—Large shipments of cattle that were received at the Union Stock yards a week ago tended to dullness in which the market closed the week. Quotations for all classes of stock was 15c down. Prok the week and buyers did not improve through the season. Quotations are as follows: Cattle, \$1.50 to \$2.00; sheep, \$1.00 to \$1.50; pigs, \$1.00 to \$1.50.

EXPORT BUTTER AND CHEESE.—Montreal, Saturday, Feb. 25.—There is nothing doing in connection with the export of butter and cheese. Quotations are as follows: Butter, \$1.50 to \$2.00; cheese, \$1.00 to \$1.50.

GRANGE NOTES.—"Rural Verses, Urban. Their Conflict and Its Cause," is the title of a book by John W. Bookwater, that has reached us recently. The book is a collection of the conditions affecting the national and international relations of city and rural life. It deals with such subjects as the growth of agricultural cities, the unequal development of rural and urban interests, and the proportionate growth of rural and urban life, the ethics of trade and industry and the duties of the farmer and the citizen. It is published by the Knickerbocker Press, New York City.

PRINCE EDWARD HAS ORGANIZED.—A series of meetings was held last week in Prince Edward County, Ont., in the suburbs of the farmer's movement. Five county granges were organized. The farmers of this county are thoroughly aroused and intend doing their part to advance their interests.

Imported Champion Percheron Stallions for Sale.—The winners of all Firsts, Sweepstakes and Medals at Toronto and Ottawa Fairs. Prices below all competitors, quality and breeding considered. Terms to suit the buyer.

John Hawthorne, SIMCOE, ONTARIO.—"Come to the Home of the Prize Winners." JOHN HAWTHORNE, SIMCOE, ONTARIO.

MONTREAL HOG MARKET.—Montreal, Saturday, Feb. 25.—Receipts of live hogs into this city were somewhat heavier than the week before, and as the quantity was too great to be easily moved by the local dealers, prices were decidedly easier, and in some cases a decline of 1c to 2c a cwt. was reported, sales being made at \$7.50, \$7.65 and \$7.75 a cwt. for a fairly active trade at dressed hogs. Sales are being made freely at \$10.00 to \$10.25 a cwt. for fresh killed abattoir stock. Country dressed are quoted at \$5.50 to \$5.75 a cwt.

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Let Us Tell You Your Ear For a Minute or so.—We hear that you are going to build a rural phone line in your locality and enjoy the benefits of telephone-served districts. We commend you for your enterprise.

But lend us your ear for a minute or so. Listen while we advise you that you can find the most satisfactory arrangement is an Independent System. With an Independent System you own the telephones and equipment outright, instead of paying an exorbitant yearly rental to the trust. You soon save a great deal of money.

But send for our No. 2 Bulletin, which gives complete information about building and operating a telephone system. With this No. 2 Bulletin we will, if requested, send you our handsome new book, "Canadian and the Telephone." For this book a leading artist has drawn thirty-two pictures illustrating the necessity and benefits of the telephone in rural districts.

If your system is already in operation ask us to send you two or three of our telephones for free trial, so that you can compare them with others. We welcome comparison tests for our 'phones, because we are sure of their superior quality. We make prompt shipments of all kinds of telephone equipment.

as farmers. Granges were formed at Bloomfield, Demorestville, Mountain View, Wellington, and West Lake. The county held Saturday afternoon in the Grand Opera House. The following officers were elected: Master, Jos. J. Brown, Bloomfield; Secretary, Wm. Barber, Bloomfield; Treasurer, W. R. Leavens, Mountain View; T. O. Wright, Pictou; Lecturer, B. F. Wilson, Northport; Chaplain, B. Mory, West Lake; Steward, W. S. Benson, Pictou; Assistant Steward, B. Leavens, Bloomfield; Gate-keeper, R. McDonald, Wellington; Executive, Jas. R. Anderson, Mountain View; Coroner, W. H. H. Watt, West Lake; W. R. Leavens, Jos. J. Brown, W. G. Badley, Northport; L. D. Lorian, Rose Hall, D. C. A. Publow, Pictou.

Meetings were held at Cherry Valley, Milford, Waupoos, Robin's Mills, and Compton. Granges are likely to be formed at several of these points. The principal speakers were E. C. Drury, Crown Hill, agriculturist, the main points of whose address were published in last week's issue of Farm and Dairy, and W. L. Smith, of the Weekly Sun, Toronto.

Much of the success of the meetings was due to the efforts of Jas. R. Anderson, W. R. Leavens, J. G. Wright, and W. R. Leavens.

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If your system is already in operation ask us to send you two or three of our telephones for free trial, so that you can compare them with others. We welcome comparison tests for our 'phones, because we are sure of their superior quality. We make prompt shipments of all kinds of telephone equipment.



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This Concrete Root Cellar Costs Less Than Wood and is Much More Durable

Concrete is especially useful in the construction of root cellar floors and walls.

Experience proves that for the farmer, Concrete is superior to wood in every point of comparison.

Concrete permits of a sufficient degree of coolness without risk of freezing. There is no question as to the durability of Concrete; it lasts not for years, but for ages, and requires neither painting nor repairing.

Aside from this, a concrete-constructed root cellar will positively prevent the inroads of rats and mice, which prove such a direct source of expense to the farmer by their great destructiveness.

Anyone who has ever scooped vegetables from an old plank floor will appreciate the fact that Concrete offers a smooth, continuous surface with no projecting plank ends or nails to damage the scoop or ruffle the temper of the scooper.

A root cellar built of Concrete is absolutely fireproof, rat-proof and wear-proof. It can be used for years and at the end of that time will be found to keep vegetables in as fresh, sweet and wholesome a condition as the day it was first built.

With Concrete, first cost is last cost. It is easily kept clean and sanitary and is pleasing to look at.

A Concrete root house will not only give you decidedly better service at less cost than any other material, but it will add much to the value and appearance of your farm.

Everything else being equal, the farmer who builds of Concrete can obtain a much better price for his farm in the event of a sale than a farmer whose buildings are constructed of wood.

Our new Illustrated Book tells everything you may want to know about concrete. IT'S FREE! Tear off, sign and mail coupon.

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It tells in plain, simple fashion how you can use Concrete in the construction of almost every farm utility. Everything—from the preparation of the ground, and the building of the forms, to the mixing of the Concrete and the completed structure—is told in language so understandable that you will find it easy to follow the directions and in many cases do much of the work yourself.

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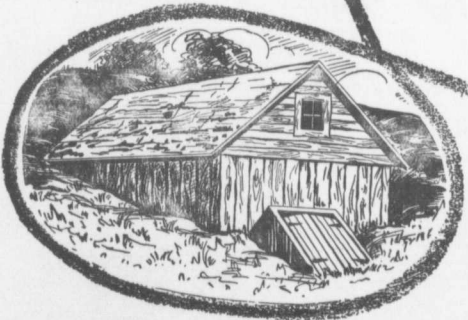
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HOW TO BUILD RURAL TELEPHONE LINES

igs, as branch wires can be run from the main line to the buildings and then over wire and simply the construction. Reference to Fig. 4, in which a, c, etc., represent the buildings to be connected, on the main line and s and t the branch wires, will make this point clear.

POLES.

Poles twenty-two or twenty-five feet long of any good stock, cut when green, should be used. Cedar and chestnut are particularly desirable on account of their lasting qualities. The poles should be reasonably straight and well proportional. The diameter

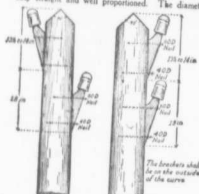


Fig. 3—Location of Brackets on Pole for Straight Lines. Fig. 4—Location of Brackets on Pole at Curves.

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of the top of the pole should be about 5 or 6 inches. In order to prolong the life of the poles and add to their attractiveness, all the bark should be removed, knots trimmed close and the butt cut off square. The top of the poles should be roiled as shown in Fig. 5.

POLE FITTINGS

Where only one or two line wires are to be mounted on the poles, oak brackets fitted with glass insulators are fastened to the pole as indicated in Fig. 5 for straight lines, or as shown in Fig. 6 at curves. The brackets should be attached to the poles before the poles are raised.



BRACKETS.

Brackets Figs. 7 and 8 are usually made of oak and given two coats of metallic paint and have a thread on the upper end to which is fastened a glass insulator, a type, as used in telephone work, is shown in Fig. 12.

They should be about 18 inches apart. The upper bracket should be 8 inches from the top of the pole

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THIS book consists of 100 solid pages of carefully compiled information on the building of rural telephone lines. It is well printed, profusely illustrated and handsomely bound in stiff, cloth-covered binding. Apart entirely from its actual cost of printing and binding, the preparation of the technical matter in it has run into a great deal of money. That is why we ask for the coupon—we want to be sure that you are interested in the subject, before we go to the expense of sending you this book dealing with

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complished, government regulations on the subject—in fact, every detail you could possibly think of or need to know. If there is no telephone system in your community to-day, it is only a matter of time until there will be one. Farmers are organizing community-owned systems all over the country. Some day one will be organized in your locality. You owe it to yourself to know the facts, for knowing the facts may mean money to you. Send for the book—use the coupon NOW.

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