

Fourth Annual Special Orchard and Garden Magazine Number

VOL. XXXI.

NUMBER 10

FARM AND DAIRY & RURAL HOME

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1912

PETERBORO, ONT.

MARCH 7

1912.



A WELL MANAGED ORCHARD IS A VALUABLE ASSET ON ANY FARM

There is no surer way of increasing the value of the average farm than by setting a few acres to orchard. In the Western States bearing orchards return profits on an investment of \$2,500 an acre. In Ontario land devoted to apples has returned fifteen per cent. on a valuation of \$1,000 an acre. This land would be worth only one-tenth this amount if devoted to ordinary farm crops. Valuations such as these, however, are only possible where orchard practice is carried on in its highest form, where pruning, spraying, thinning and thorough cultivation are given first attention. All of the expense involved in first-class methods is brought back to us many fold in the increased value of the crop. The increased value of the land is so much to the good.

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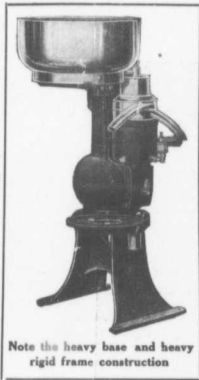
NEVER HAD AN ACCIDENT

You will have to go a long way to find a person who has had an accident with a "SIMPLEX" bowl. And, what's more! A worn out Simplex Link-Blade Separator is as scarce as hen's teeth. There are several reasons why this Separator has the reputation of being a "no break, no wear" machine.

The "Simplex" bowls are made of a very ductile grade of seamless steel tubing, that even if it were subjected to an extreme pressure would stretch, but would not fly to pieces. The spindles are made of a special grade of high carbon steel, heat treated, to increase their toughness.

There is no safer or stronger bowl than the low speed SIMPLEX bowl, and this is a point that you should think about especially in these days of cheaply built high bowl speed separators.

Our aim is to make a Cream Separator that is stronger than is actually necessary. When you buy a Separator, buy a good one. The safest way is to get in touch with our nearest agent.



Note the heavy base and heavy rigid frame construction

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WE WANT AGENTS IN A FEW UNREPRESENTED DISTRICTS

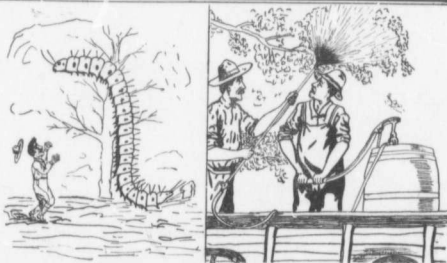
DAIRYING—First amongst Canadian Industries; represents a revenue exceeding \$100,000,000 annually; numbers amongst its people the most prosperous, most progressive class of farmers, extant.

These people are now looking forward to our Great Dairy Annual, April 4, opening the dairy season 1912.

You're wise and therefore will be in this greatest of our FARM AND DAIRY Annuals. Send us a line to-day about your reservation.

Advertising Department, FARM AND DAIRY, Peterboro, Ont.

It is desirable to mention the name of the publication when writing to advertisers



ORCHARD PESTS HAVE NOW NO TERROR FOR FRUIT GROWERS.

The time was when we regarded wormy apples as a necessary evil; the cooking moth, scab and other orchard pests too numerous to mention held undisputed sway in our orchards. But the day of the orchard pest is passing. With accurate knowledge of how and when to spray, what to spray with and efficient machinery for applying his sprays, the fruit grower is in command. There is no longer any excuse for wormy or diseased fruit. With the better fruit resulting prices have risen, profits to the grower have increased and the fruit industry is on a stronger, firmer basis than in the good old days when a crop of good fruit depended on the weather and "luck."

Lessons from last Season

P. J. Carey, Dom. Fruit Inspector, Toronto

The apple business for the season 1911-12, while to most of growers a profitable one, has been to many of the dealers a disappointment. Two facts seem to stand out boldly: First, the crop has not been a large one generally speaking, and secondly, the demand did not seem to equal the supply. Many of those closely connected with the industry are somewhat puzzled over the situation.

There were many causes that contributed to the bringing about of the existing results. I will mention first one condition. The fact that quite early in the season many varieties, especially the Spy, showed signs of an early breakdown in keeping quality, had a deterring effect on the demand, and dealers who under other conditions would have bought freely moved cautiously, and many practically dropped out of the business.

TOO MUCH SPECULATION

Another reason (and one in my judgment that has a most killing effect on any trade) was the fact that large quantities of our apples were bought up early in the season at very high figures, higher than the demand would seem to warrant. Naturally dealers looked and worked hard for at least some profit. When selling time came it was very difficult to secure orders showing a profit. This, of course, hindered the free movement of the fruit—and many of the varieties that should have gone into consumption perhaps a month earlier were held until fruit was in a wasty condition. Where dealers succeeded in making sales at those high prices by the time the fruit had passed through the hands of smaller handlers, it could be called only a luxury by the time it reached the consumer.

At this stage in the life of the apple industry it would be well for the growers and handlers of apples to realize this fact, that in order to market the great apple crop of Canada with a profit there must be a free and rapid movement of the different varieties in their season and at such prices that at least a large percentage of the masses may eat apples.

THINNING THE FRUIT ADVISED

The necessity of thinning was shown more plainly than ever last season. Thousands of barrels of small stuff were placed on the markets that never should have been packed at all.

The evaporator or cider mill is the place for it, if growers must produce it, but this class of fruit could be almost entirely eliminated by thinning. A large or even a medium crop of irregular quality will always have a demoralizing effect on the market, but I have little fear of a glut even in the case of a maximum crop, if fruit is of fine quality.

The precooling of fruit before being packed is a large factor in its successful handling, and this too has been well shown out in last season's operations. The heating of apples in barrels while in transit has put many a package out of business. The more general use of the box will meet this trouble to some extent.

Each season bringing its lessons, and the many varying conditions surrounding the fruit industry is bound to keep the apple man on the run.

Orchard and Dairy

E. Terrill, Northumberland Co., Ont.

We find that an orchard well worked and thoroughly looked after in proper season makes a nice, profitable side line to our main occupation, which is dairying. The dairy farmer who has from five to 10 acres of orchard, and who in the proper season gives his orchard his careful attention in the line of plowing, cultivating, pruning and spraying will receive greater returns per acre from his orchard than from any other part of his farm. At least that has been our experience.

Experiments carried on in our neighborhood by our District Representative, Mr. R. S. Duncan, go to show that orchards that have been neglected for many years and have not been in any sense of benefit to their owners have been, by the application of right methods, made to yield a return equal to 30 per cent. on the investment. This goes to show what can be done to an orchard neglected for years.

Many dairymen have orchards of this kind. We know from experience that orcharding and dairying make a great combination and that we can well afford to give our orchards proper care.

If San Jose scale is present spray with lime-sulphur while the tree is dormant. It will also control leaf curl on peaches and the warty bud loose, the blister mite and the cystic shell bark louse of the apple.—J. P. Paget, Lincoln Co., Ont.

Issued Each Week

Vol. XXXI.

SOME

The Various Systems

THE square systems of most growers



J. W. Crow, on in both directions the standpoint of to get the maximum of course, secure (of sunshine), the and west, but think, that essentially spraying north and south lie it is advisable spraying to have arranged that one south, thereby east and west

The hexagonal has been largely ities, and is chosen that it wrees per acre the minimum did to all other trees Close planting is when it is a question to persons who m in fruit matters, growing standpipes advisable to plant an acre. The winter apples in 40 feet on the square the hexagonal w trees planted at that plan would each other for for sunshine and than would trees planted at 40 feet tem.

All things considered square system is over any of the equal opportunity both directions, a opportunity for sun parts of a tree.

FARM AND DAIRY & RURAL HOME

SOME IMPORTANT CONSIDERATIONS IN ARRANGING TREES IN THE ORCHARD

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

The Various Systems of Orchard Planting Discussed. Why the Square System is Preferred. How to Arrange Varieties to Promote Proper Cross-fertilization and Make Spraying Easy.

THE square, hexagonal, and oblong are the systems of arranging trees in the orchard in most general use among fruit growers. In the last named system the trees are planted at a greater distance in one direction than the other, for instance, 80 feet by 40 feet. If this system is used the trees will ultimately form more or less solid rows in one direction, and all team work must be carried on in the direction in which the rows run.

This system is open to serious objection on the ground that J. W. Crow, cultivation cannot be carried on in both directions, and also from the standpoint of spraying. In order to get the maximum color (which is, of course, secured by taking advantage of sunshine), the rows should run east and west, but it will be found, I think, that east and west rows are less easily sprayed than rows running north and south. In general, I believe it is advisable for efficiency in spraying to have the orchard so arranged that one can drive north and south, thereby taking advantage of east and west winds.

NO. 2 TREES PER ACRE

The hexagonal system of planting has been largely used in western localities, and is chiefly advised for the reason that it will accommodate more trees per acre than any other system, the minimum distance from one tree to all other trees being the same. Close planting may be advantageous when it is a question of selling land to persons who may not be experienced in fruit matters, but from the fruit-growing standpoint it is certainly not advisable to plant too many trees on an acre. The standard distance for winter apples in Ontario is 40 feet by 40 feet on the square. Forty feet by the hexagonal would be too close, as trees planted at that distance and on that plan would be found to crowd each other for root space, as well as for sunshine and air, much more than would trees of the same size planted at 40 feet on the square system.

All things considered, I believe the square system is much to be preferred over any of the others. It gives equal opportunity for cultivating in both directions, and it also gives opportunity for sunshine to reach all parts of a tree. This latter point I

consider of very great importance. Another point in which the square system is to be preferred over the hexagonal is that it gives greater opportunity for the use of fillers. It is a difficult matter to arrange fillers in a hexagonal orchard unless the permanent trees stand at very great distances.

PLAN FOR PROPER FERTILIZATION

The question of adequate cross-pollination is one which requires to be planned for beforehand in arranging the trees in an orchard. Many of our best varieties, such as Northern Spy, McIntosh Red and others, are partially or wholly self-sterile and require other varieties in the immediate vicinity in order to secure proper fertilization of their blossoms. It is stated by some in-

vestigators that even in the case of self-fertile varieties cross-pollination by other sorts is beneficial. In a majority of cases, I believe this to be correct, although there may be occasional instances in which the point is not worthy of consideration.

I should advise alternating varieties and would prefer not to plant more than two rows of each kind together. For convenience in harvesting, rows should be in pairs. Two of a kind might be planted together, or four of a kind. Better pollination would be secured, I believe, where only two rows of each kind are used.

SOLID ROWS, BETTER SPRAYING

For the sake of greatest efficiency in spraying, it is much better, I believe, to plant varieties in solid rows. If two or more varieties are contained in one row, the probability is that some would be ready for spraying earlier than others, and to do the work properly it would be necessary to go over the ground twice. This is especially true of the codling moth spray for apples. There is

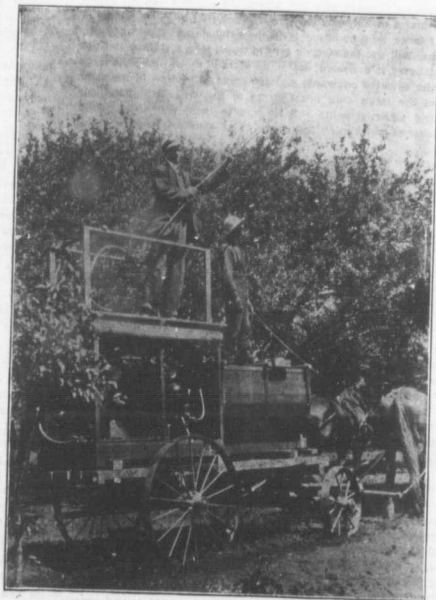
frequently a difference of several days in the blooming period of different varieties, and if solid rows can be sprayed at one time much better work will be done. As mentioned previously, I believe it is a good idea to arrange an orchard so that one can drive north and south for spraying purposes. Winds in this country are mostly from east or west, and in order to make best use of them in spraying it is advisable to drive at right angles to them.

Cultivate Between the Trees

W. Dreaker, Macdonald College, Que.

Measuring the length of roots of young trees and comparing that length with the width of the crown it has been found that the roots occupy an area twice as large as the crown does, it follows that if the trees are planted the usual width apart their roots will ultimately occupy the whole area between the rows; moreover, the roots most actively engaged in taking up food are the youngest, those that are farthest away from the trunk.

These facts show that in order to obtain the best results the whole area occupied by the roots must be cultivated, and this holds equally true for a young orchard, because in that case the ground must always be in such a state as to allow the roots to expand rapidly and grow at a depth where moisture is always available, and where they shall be protected more or less from the plow or frost. The sooner and the better cultivation is practised the better results obtained later—and that with considerable less work.



Orchard Pests Stand No Chance Against an Outfit Such as This
The day is past when we look on wormy or spotted apples as a necessary evil. With a knowledge of the best spraying solutions for each pest now have, we have solved the problem of producing a high percentage of No. 1 fruit. The ranks of up-to-date orchardists are swelling every year. Numerous. This illustration is from a photo taken in an orchard in Halton Co., Ont.

REMEDIES THAT WOULD INCREASE RURAL DEPOPULATION

ARTICLE No. 13.

Among the most commonly advocated remedies for rural depopulation are the building of better country roads, the construction of trolley lines, the extension of free rural mail delivery and the establishment of a cheap parcels post. None of these suggested remedies will stop rural depopulation. Instead, they will help to increase it.

Just as it is natural for water to run down hill, so it is natural for people to buy the goods they require wherever these goods can be purchased at the lowest cost. Just as a large horse can outdraw a lighter animal, so the town store can undersell the village store. In the same way, the merchant in the city can undersell the merchant in the town. The reasons are apparent. The trade of the country merchant is limited. He has to buy most of his goods in small quantities. He cannot carry a large stock of any one line of goods. The city dealer, on the other hand, has a large constituency. He buys at wholesale, or jobber's rates. Large concerns like the T. Eaton Co. and the Robert Simpson Co., of Toronto, or Scroggie's, of Montreal, frequently purchase the entire outfit of factories manufacturing staple lines of goods. Because of their great organizations they are able to advertise extensively in the daily and agricultural press. More and more the farm press are being used as mediums for this class of advertising. Thus the low prices at which these town and city sellers sell their goods are being constantly brought to the attention of people living in the country. Anything that will make it easier for those of us who live on the farm to pass by our country merchants and deal with the larger firms in nearby towns or more distant cities will not only not check but on the other hand will increase rural depopulation.

LOCAL CENTERS ARE NEEDED

Our country districts need more, not less, social centers. The more of these there are the more attractive will be life on the farm. And yet these social centers are rapidly disappearing. They first become stagnant, then die. Small grist mills are being driven out by large ones located elsewhere. Small implement factories are being crushed by the competition of the huge establishments in our cities. The small country merchants are being forced to the wall by the great mail order firms, located it may be, hundreds of miles away. And as each rural industry in the course of the industrial warfare that is becoming more intense year by year, is driven out of existence, the value of farm land tends to depreciate, country life becomes more isolated, cities grow in size, city land values advance, and rural depopulation is increased. The census figures reveal how intense is this tendency. During the past ten years—in spite of the great influx of settlers to the farms in western Canada—the rural population of Canada has increased only 16 per cent, while the population of our towns and cities has increased 64 per cent.

WHAT THE PROPOSED REMEDIES WOULD DO

The building of better country roads and of trolley lines, as well as the extension of rural mail delivery and parcels post, will help to increase this trend of population by drawing away more and more of the trade of the country from its local centers into the larger towns and cities. As better roads are established, an increasing number of our leading farmers who can afford the expense—as conditions in portions of the United States prove—will invest in automobiles and drive 30, 40 or 50 miles for a day's shopping and business in the nearest large town or city. With the extension of the trolley line our wives and daughters, and we, ourselves, will use the electric cars to travel long distances to trade in the larger centers. As rural free mail delivery is extended, more and more of us will take the large city daily papers. Thus our minds will be diverted citywards and our trade will follow in the same direction. Should parcels post be granted the large mail order firms in the cities will flood our farmers with their circulars, catalogues and advertisements and trade with them will be so facilitated that scores of our smaller country concerns will vanish while our cities grow in size and influence.

THE GROWING POWER OF CITIES

This growing power of the city to suck up the trade and wealth of the country districts has reached startling proportions in the United States. Conditions are just as serious in Canada. Ex-President Roosevelt recognized the portent of this situation some years ago, when he appointed a country life commission, the members of which were instructed to investigate and, if possible, find the cause and remedy. The chairman of this commission was Prof. L. H. Bailey, of Cornell University, Ithaca, N. Y. This is the conclusion Prof. Bailey reached, after investigating conditions throughout the United States, as expressed in his book, "The State and The Farmer":

"Canals, railroads, telegraphs, postal routes have drained the country into the city. Wealth has been piled up at the terminals, which are the trading places, until society has become ganglionic in its organization. Banking systems take the money from the hands of those who earn it, and put it into the hands of those who trade with it. * * * The organizations that control farmers by controlling their products are in the cities. The tariff-protection system has fostered this general aggregational movement. It has tended to the concentration of wealth. If it has aided the farmer, it is because it has aided some one else first and more. We have been living in 'an epoch of city development, with no adequate means of redistributing or returning the energy to the regions of its origin. It has been a process of dump. We are now, however, at the beginning of a new species of rural drainage consequent on the wide extension of highway building, of trolley lines, of rural free deliveries, of telephones, and other local centering agencies. In other words we are now entering the epoch of the small city: into these cities the surrounding country now will drain."

ANOTHER REMEDY REQUIRED

Farm and Dairy is not opposed to the building of better country roads or to any of the other suggested remedies for rural depopulation to which reference has been made. Instead we favor them all. We merely want to point out that instead of preventing rural depopulation they will but increase it until the real remedies are understood and applied. One of these remedies has already been mentioned. It is the taxation of land values on a provincial and national basis so that the wealth from the country that is now being piled up in the cities, as shown by the enormous and rapidly increasing value of land in our cities, will be returned to the country districts through the increased taxes this land will pay. These taxes will not fall on the poor in the cities but on the land holders and speculators, who now reap wealth which they do nothing to earn. Other remedies will be pointed out later. The true solution of the problem of rural depopulation lies in so framing our laws and adjusting our methods of taxation that the burdens now borne by us farmers—although most of us do not recognize it—will be removed and agriculture thereby be made so profitable that people instead of deserting it will be glad to engage in it.

A Great Boom in Spraying

M. B. Clarke, F. E. Co., Ont.

As recently as 1907 there were not over a dozen fruit growers spraying in Prince Edward County. In 1911 the most conservative estimate places the number at 1,000. What has brought about this remarkable boom in spraying?

A great deal of credit is due our District Representatives, who have been tireless in their efforts to assist and encourage the fruit grower. In 1909 our representative held a series of orchard meetings, pointing out the different diseases and insects and explaining the method of controlling them. A few of us became interested and started spraying, cultivating, pruning, etc.,



Just Ready for the Final Spraying

The eggs of the codling moth are in the calyx end of the newly set fruit, and if spraying is to be effective we must leave the poison inside the calyx. The apples in the illustration are in the proper condition for the final spraying with a poisoned solution. In a few days the calyx will be closed and further spraying will do little if any good.

and the marvellous results obtained were so noticeable that the movement has spread to its present proportions.

THREE SPRAYINGS ENOUGH

It has been found that three sprayings will control practically all the orchard pests in our section: First, Lime-sulphur at one to 11, just as the leaf buds are swelling; this is for bark, lice, leaf blister-mite, aphids and canker. Second, Lime-sulphur, one to 35, and arsenate of lead, two pounds to 40 gallons water, just before blossom buds open. This spray is for bud moth, leaf-eating insects and scab, which often attack the delicate stems, causing the fruit to drop later in the season. Third, Same formula as second spray. This is for the codling moth and apple scab, and should be applied immediately after the blossom leaves fall.

It is very essential to spray at a high pressure if we would get the best results; the only way to be sure of knowing is to have a pressure gauge on your spray pump. Our District Representative called on a large number of men at spraying time two years ago and attached a pressure gauge to their pumps, and found the majority of the ordinary barrel pumps would produce only about a 60-pound pressure. We cannot get satisfactory results at less than 100-pound pressure; 150 pounds is still better and 200 pounds is best. Of course this latter pressure can only be had by using a good power outfit.

DON'T SPARE THE MIXTURE

We drench out trees every time we spray, usually from four to 10 gallons a tree. It is absolutely essential to coat every particle of the tree if we would control bark-lice, San Jose scale or apple scab.

(Continued on page 8)

Concent

A. Why do British Columbia commercial lime sulphur? In last year's crop though this acreage appeared same as in 1910, 30,000 of land in exclusive of the vines has an \$2,500. This comes as a fit that making from of high quality. And in all sulphur is used. A barrel of hon sulphur to be ley.

These gro commercial lime they have fient, economie. They is an age of They would to make the treated lime they would own clothes, ery, etc., or. They recognize pared as it the direction preferred to selves make.

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Two other po

Concentrated Lime-Sulphur Endorsed

A. P. Lummis, Welland Co., Ont.

Why do the most successful fruit growers of British Columbia and the United States use commercial lime-sulphur in preference to any other spray? In the Wenatchee Valley of Oregon they last year produced 49,027 car loads of apples. Although this valley has an acreage approximately the same as Prince Edward county, 30,000 acres, every acre of land in the Valley exclusive of the residential sections has an average value of \$2,500. This high valuation comes as a result of the profits that these growers are making from the production of high quality fancy apples. And in all that district, lime-sulphur is the spray universally used. There is not a barrel of home made lime-sulphur to be found in the Valley.

These growers use commercial lime-sulphur because they have found it convenient, economical and effective. They realize that this is an age of specialization. They would no more attempt to make their own concentrated lime-sulphur than they would to make their own clothes, wagons, machinery, etc., or to grind their own wheat into flour. They recognize that the commercial solution, prepared as it is in immense quantities and under the direction of expert chemists, is much to be preferred to any solution that they can themselves make.

Many fruit growers in Ontario are beginning to look on commercial lime-sulphur favorably. We ourselves have used it, and would not for any money go back to the old system of boiling it at home. For our ten-acre orchard the expense and trouble connected with home boiling would buy all of the commercial preparation that we need; and we get a better article to boot.

Points on Pear Culture

John Beemer, Brant Co., Ont.

My pear orchard is one of the most profitable parts of my farm, yielding returns in the neighborhood of \$200 an acre. My soil is a heavy clay loam. Each spring we plan to have a cover crop on the land to plow down for the sake of the humus that is formed. The crop usually sown is rye, but this is varied every two or three years with common red clover or hairy vetch. The land is plowed as early in the spring as possible and thoroughly cultivated up to the middle of July when the cover crop is seeded.

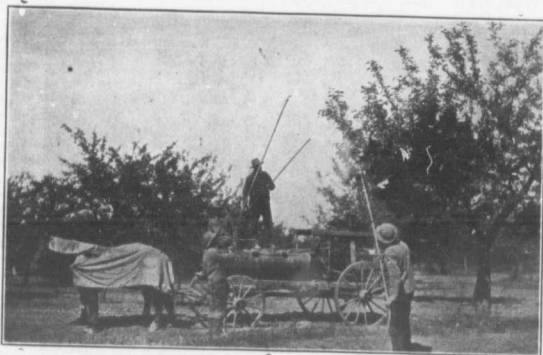
Every third or fourth year I apply 60 to 70 bushels of good unleached wood ashes to the acre, or muriate of potash containing an equivalent amount of potash fertilizer. I do not favor barn yard manure for the pear orchard, as it causes excessive wood growth. I find that my pears do not blight badly when manure is used sparingly.

CUT OUT ONE-THIRD NEW WOOD

I start to prune about March 1st and cut away one-third of the new growth if the trees are making 12 to 15 inches of new wood. In the Keofer's I thin out the fruit spurs as this saves a lot of thinning of the fruit and helps to keep up the vitality of the tree. When such thinning is practiced the fruit is more uniform in size and better flavor.

Two other points of importance are spraying

and thinning the fruit. We spray with lime sulphur and lead arsenate for the curesnio and pear ail. If the trees are heavily loaded the fruit is thinned to from four to six inches apart on the tree. I have nearly all No. 1 fruit as a result of this practice and more baskets than if no thinning was done. I consider that the time



An Outfit such as This Ensures the best of Work at Minimum Expense.

The power sprayer is coming into almost universal use in fruit growing districts. Growers with large orchards can afford to have one of their own. Growers with only a small area in for them. The power machine ensures a better application of the spray solution and enables the grower to spray a large orchard at just that period of growth when it is most needed. The power sprayer here shown is owned by S. C. Parker, Kings Co., N.S.

spent in thinning is more than repaid at picking time.

Coal ashes while not containing any real fertilizing ingredients, will greatly improve the texture



Low-headed Trees are Gaining in Favor

Low headed trees are the common thing in British Columbia, where they are preferred because of the ease with which they may be pruned, sprayed and the crop harvested. Eastern growers are now adopting this system of heading. The illustration shows a couple of apple trees set last spring in the orchard of Mr. Jno. Beemer, Brant Co., Ont. Neither of the trees would be considered high headed and one has a trunk only a foot long. Mr. Beemer is one of our many fruit growers who is coming to favor low headed trees.

—Photo by an editor of Farm and Dairy.

of a heavy soil, making it lighter and warmer. Coal ashes will act in the opposite way on a light, sandy soil, by consolidating it and making it more able to retain moisture.—A. L. Colman, Halton Co., Ont.

Pruning the old Apple Orchard

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

To prune a neglected apple orchard we cannot put down any hard and fast rule, as varieties differ in their growth and require different care. A Spy tree for instance requires a good deal of the outside as this variety thickens very much at the end of the limbs. The R. I. Greening on the other hand can be pruned mostly from the inside of the tree. A few general principles, however, should always be before the operator.

Heavy pruning in any one season is a severe shock to a tree and will in many cases injure its bearing qualities for several years. It is better to take at least two seasons for this operation. Fruit grown on very high trees is difficult and expensive to spray, thin and harvest, and is not usually well done. Encourage fruit spurs all over the inside of the trees. It is well to remember that a sucker left two or three years becomes a fruit spur and produces the finest of apples. Instead of cutting it off we cut it back one half. Try it and see what it will do for you in a year or two. We never leave long bare limbs inside of our tree. We cut back some of the suckers and have them growing apples.

TO PROMOTE HIGH COLOR

Sunshine makes color. We trim to have every apple share its rays. And last, but not least, we believe it better to trim too little than too much. We don't cut off a limb unless we know why we are cutting it. If a tree is very thick we would only cut out the dead and cross limbs the first season. The second season we would lower the highest portions, always cutting back to where another limb starts. We cut close and never leave stubs. It is well to make cuts perpendicular to shed the rain and cover large wounds with white paint.

An ideal tree should be symmetrical and open to allow sunlight and air to all its parts. A tree once in shape should be gone over annually, cutting out any cross limbs and suckers where not required. This, with occasionally a little thinning from the outside, is all that is required. A tree kept in this shape will be a pleasure and a profit to its owner for many years to come.

An Important Point in Spraying

Newton H. Brown, Norfolk Co., Ont.

Thorough spraying is of particular value when we have dry, hot weather at blossoming time. In the spring of 1911 much of the fruit in Western Ontario did not set, although the blossoming was heavy. When we went into our own orchard we found the blossoms were wilted and apparently dead from the heat. I decided that it would be wasted effort to spray these trees, as we would not have a crop anyway. Having some spraying material left in the tank, however, we used it on a few trees on one side of the orchard. And even then we were careless and did not spray thoroughly.

From these few sprayed trees we harvested the heaviest crop we have had in years, while the rest of the crop was a failure. It was a costly lesson for us, but we will not forget it in a hurry.

Valuable Orchard Land in the Making

An enthusiastic orchardist has said to me: "If the farmers along the lake front between Toronto and Montreal would set their land to apple trees they would make their land worth in the course of a few years from \$300 to \$600 an acre, whereas now it is worth from \$60 to \$80, and in some few cases, a possible \$100 per acre. Furthermore a mature, good bearing apple orchard will give returns of 15 per cent annually on a valuation of \$1,000 per acre."

I am somewhat of an enthusiast about orchard work, and while I have heard leading reputable apple growers make the statement in general public meetings that they received returns from their apple orchards equal to 15 per cent on a valuation of \$1,000 an acre, I never cared to talk too much about it. I thought these must be special cases, and peculiar soil conditions as well as climate would be necessary to get these returns. But practical experience and first-hand observation in many districts of Ontario during the past several years have caused me to accept this statement as "gospel" truth.

HOW TO IMPROVE SOIL CONDITIONS

Not all land in its natural condition is adapted to apple growing. But lately I have found out that much of it can be improved and apple trees made to thrive grandly thereon. I refer particularly to those clay formations having impervious subsoil and hard-pan. These may be broken up by means of blasting powder, or dynamite, and the trees afterwards set will thrive as they do on naturally favorable soil.

Stumping powder in orchard work has several uses, one of the chief of which is in connection with setting out young trees. It saves much labor and time in planting the trees and ensures an open porous subsoil, conducive to the best growth and large ultimate yields of fruit.

The work of excavating for a tree, to do it properly by the old method of hand digging, may take an hour. Stumping powder will excavate it in an instant. The spaded hole will be hard all the way down, making it difficult for the transplanted roots to take hold, which is one of the chief reasons why transplanted trees so often die.

HOW A VIRGINIAN FARMER PLANTS TREES

Down in the New England States, notably in Virginia, stumping powder and dynamite have been used with great success in connection with orchard work. The following is the testimony of a Virginian farmer who has used dynamite in orchard farming and writes of his experience for Rural Life:

"I have just finished the planting of 700 trees, beautifully located on a southern slope, with an altitude of 525 feet. The soil in this locality is red clay, with a slaty subsoil, so we think the only way to be successful with fruit trees is to blow up the planting holes with dynamite.

"I prefer the ground to be first drilled out three feet deep, then shoot one stick of dynamite in the bottom. This does not always blow it out to any great extent, but it turns the soil over, breaks up the slate and aerates the subsoil. This method we believe will put our slaty soil in condition to produce better apples and more of them."

And so it is with many of us farmers in Ontario and other fruit growing provinces of Canada, —we can, by taking thought, make our land more suitable for apple growing, ensuring the success

of our newly set apple trees, and thereby greatly increase our land in productiveness and in real value.—C. C. N.

Tomatoes.—We start the first tomato plants about March first, and we like to pinch them out often. As soon as they have four leaves on we



Strawberry Culture on a Commercial Scale as Practised in Ontario

Mr. Jas. E. Johnson of Norfolk, Ont., is widely known as a successful apple grower. It is not so well known that he derives a large revenue from strawberries as well. A view of his extensive strawberry plantation is here shown. Where one can get lots of help at picking time strawberries on a commercial scale may be very profitable.

pinch them out again. You get a better looking plant by firming the soil. We transplant three times—often four. We leaf them in shallow flats. Spark's Earliana is grown for the majority. Chalk's Early Jewel is a fine looking tomato, but two weeks late with us—J. L. Hilburn, Essex Co., Ont.



A Case Where Thinning Would Have Been Advisable

The apples on this well loaded limb, taken from the orchard of Robt. Ball, Westmoreland Co., N. B., are too close together to produce finest quality fruit. Thinning would have improved the quality of the fruit and made a crop the next year more certain.

Sound Arguments for Thinning Fruit

J. W. Clarke, Brant Co., Ont.

Thinning apples when on the trees pays, especially if we pack and ship ourselves. When apples are properly thinned, the crop will be 90 per cent No. 1. The packer can easily pay one dollar a barrel more for apples such as this than he could for apples which would not be thinned, and which would need much culling and grading. Of course thinning takes considerable time, but this is made up to a large extent if we pick the apples ourselves. With large trees a man will thin three trees a day, and we can afford to pay a man \$2 a day to thin the fruit.

In thinning, we aim to pick out the smallest, the ill-shaped and the wormy apples. If two apples are touching one another, one of them is removed. As a rule, the top of the tree will not require much thinning, as most of the fruit is found on the lower branches.

CROPS EVERY YEAR

With proper management, apple trees should produce a fair crop every year. One of the best methods of obtaining this end is by thinning the fruit. An excessively heavy crop should be thinned by all means. In 1910, which was an off year in almost all parts of the country, our thinned orchard produced a crop of about 500 barrels.

Thinning, combined with proper pruning and cultivation, produces apples of exceptional quality. The previous owner of the orchard which we now have, said that it would not produce good apples; and the apples that he got certainly were small and poor. He advised us to cut the trees down. Since then the orchard has received proper spraying, pruning, fertilizing, and last, but not least, thinning. From these same trees we have picked apples which on several occasions won the county prize at the Horticultural Exhibition in Toronto.

Experience with Strawberries

E. B. Stevenson, Wellington Co., Ont.

I have never had my ground too rich for strawberries. I plant roots and manure well for the two years preceding the strawberry year, then give an extra coat of well rotted stable manure, well worked in before planting.

I plant rows three feet apart and the plants two feet in the row. When planting is over I go over the ground with a fine toothed cultivator and keep this up about once a week through the growing season. After the plants have stopped growing and the ground is frozen in the fall, I cover the whole bed with straw manure to a depth of two or three inches; in the spring I rake this into the paths for a mulch to keep the berries clean.

I then spray with lime and sulphur, to kill the rust that may appear before the blossoms open, and again just after the fruit has set. I grow the plants for fruit in the narrow rows as I find I get finer fruit than in the wide matted row.

The necessity of spraying with fungicides and insecticides to insure a crop of marketable apples is almost universally conceded by growers. Occasionally one is found who says he does not spray and yet his apples are a good as his neighbors'; with such as he it is of no use to argue, one can only say "Ephraim is joined to his idols, let him alone."—S. O. Parker, King's Co., N. S.

Directions

March 15. The trees until April buds will be off. At the dormant; I early; I fruit tree; other, and tie like the to grow up last year's down low. Ifly this is

Harm is ing cherries small, and crop. Feed every foot 400 fruits, thousands a of more woc

Abandon

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Directions for Pruning Cherries

F. G. Stewart, Lincoln Co., Ont.

March is the best month for pruning cherry trees. The buds are now very prominent. If left until April the sap will rise, for a few days the buds will swell, and they are then easily knocked off. At the same date apples and pears are quite dormant; hence the necessity of pruning cherries early.

Cherries require less pruning than any other fruit tree. We cut out any limbs that cross each other, and keep the head open to the sun. Varieties like the Montmorency (which has a tendency to grow upright) require the centre terminals of last year's growth cut out so as to keep the tree low. If the tree is large and bearing heavily this is all the pruning that is needed.

Harm is often done by over pruning. In pruning cherries we must remember that the fruit is small, and we must leave wood enough to grow a crop. Peach trees bear three or four peaches to every foot of wood; enough wood to bear 300 or 400 fruits to the tree would ensure wood for a good crop. It is not so with cherries. Many thousands are required on a tree, hence the need of more wood.

Abandoned Orchards Made Profitable

J. Laughland, B.S.A., Dist. Rep., Simcoe Co., Ont.

The Georgian Bay District is located favorably for the production of high-class apples. It is only in recent years, however, that our farmers have paid much attention to their orchards, and even yet there are scores of orchards that are sadly neglected. In the present state these orchards are bringing in little or no returns to the owner. After the initial pruning trees in these orchards have never seen a pruning knife, no spray

the past two years conducted demonstration orchards in the Georgian Bay District. In the neglected state apple orchards are not bringing a return of more than \$25 an acre, while with proper management a profit of at least \$100 an acre may be obtained. While this is a larger



No. 2—The same! Trees greatly improved by Pruning

This tree is the same one as in Figure No. 1, except that it has been properly pruned and put in condition to turn more of its energy to the production of apples and the swelling of the owner's pocketbook. No more profitable work can be undertaken this month than the pruning of the old orchard.

—Photo taken in Georgian Bay District.

profit than many other departments of the farm will yield, even greater returns may be expected as the following examples prove. The following is a statement showing the results obtained in Mr. John Osborne's orchard the first year that the orchard was treated in a scientific manner:

EXPENSES

Spraying of trees	\$ 2.25
Pruning	24.75
First Spraying	6.34
Second Spraying	5.15
Working of Orchard	7.75
Cover Crop	2.85
	\$49.30

RECEIPTS

22 1/2 bbls. Duchess apples at \$2.50 a bbl. (f.o.b.)	\$ 56.25
22 bbls. fall and winter apples at \$3 a bbl. (f.o.b.)	246.00
	\$302.25
Cost of barrels, picking and packing at 75c a bbl.	79.38
	(Net) \$222.87
15 1/4 bbls. culls at 60c a bbl. (net)	9.10
Total returns	\$231.97

The orchard of Mr. W. F. Hamilton, Collingwood, was in a neglected state until the spring of 1910. The profits up to then had been small. At that time steps were taken to thoroughly renovate the orchard, and the following figures show the profits for 1911:

Number of trees in orchard—199	
Total returns from fruit sold ..	\$1355.28
Total expenses	486.37
Net returns	\$ 868.91

The procedure that has brought results in neglected orchards is simple: 1, pruning; 2, spraying; 3, manuring; 4, cultivating; 5, proper grading, picking and marketing of the fruit.

HOW PRUNING WAS DONE

Overpruning an orchard trees that have not been pruned for years, such as we had in these demonstration orchards that are as thick as a hedge fence and others from which the large lower branches have been removed, leaving a tuft on the top like the tail of a clipped dog, should be carefully pruned; all dead wood must first come out. Where branches cross or interfere one should be

(Continued on page 14)

What one Orchard has done

J. J. Gilbertson, Norfolk Co., Ont.

If a crop of corn or potatoes are not thoroughly cultivated, the result will be anything but satisfactory. It is the same with the orchard. There are hundreds of orchards in Ontario to-day that are not paying for the ground on which they stand, simply because they are not cared for. From experience and observation, I have satisfied myself that even the small orchard will pay any one who will cultivate and spray, prune and fertilize. For the benefit of some doubting ones, I shall give a little of my own experience.

Eight years ago, my orchard grew practically no apples; it had been in sod for years and pastured with cattle and sheep. In 1904 the entire orchard was covered with manure. It was pruned, sprayed, ploughed and cultivated. Manure was applied for three years, but since then it has had no manure, though it has yielded a good crop annually since 1904. I sow a cover crop every year and plough every spring, and by so doing, it is possible to retain the fertility of the soil without more barn yard manure, or the use of artificial fertilizer. Since 1904 my orchard of 10 acres has been handled as I have outlined. I have only the figures of the last four years, which are as follows:

Year	Crop	% No.	Value of crop
1908	920 bbls.	7	\$2,000
1909	948 bbls.	12	\$2,094
1910	700 bbls.	12	\$1,806
1911	1,000 bbls.	12	\$3,144
Total			\$9,104
Total expense for four years ..			\$2,000
Net profit			\$7,104

Here is what some other orchards have yielded: A four-acre orchard netted \$247 an acre; 1 1/2 acres of orchard netted \$359 an acre; an orchard of 33 trees netted \$12.45 a tree.

Planting Early Varieties of Apples

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

We have found this growing of early varieties of apples fairly remunerative of late years, owing to a variety of causes, such as the extension of our markets and better transportation facilities. Their early productiveness is also a factor in their value as a money maker.

Strict attention, of course, has to be paid to the cultivation of the trees, as well as to the spraying and thinning of the fruit. Proper grading and careful packing (in boxes) is also of the highest importance, so that the apples will be placed on the market in the most attractive manner, thereby commanding the highest possible price. This, of course, applies to distant markets, such as the Canadian West, where there is a growing demand for our earlier varieties. The returns from Old Country shipments also prove satisfactory, provided they are landed in good condition. Such long journeys necessitates shipping in cold storage.

It would be inadvisable to advocate general planting of early varieties, but in districts where cooperative shipping is possible they might be planted to advantage. The principal varieties we grow are Astrachan, Duchess, Wealthy and Alexander. The first named, however, we do not recommend.

I have no fear of over-production, as I have already seventy-five acres and will plant twenty-five acres more in the spring. On my farm can be seen what it will be hard to find even in the bonanza apple ranges of British Columbia, or even the States, that is, apple trees in rows a mile long.—W. H. Gilson, Durham Co., Ont.



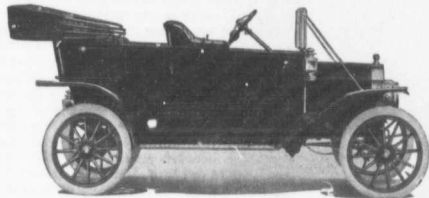
No. 1—This Tree is altogether too thick in the head

The tree here illustrated is of a type altogether too common over Ontario. The head has been so crowded to become so thick that all the vitality of the tree is expended in sustaining the leaf and wood growth. The sun cannot penetrate to the fruit, and spraying and picking are rendered difficult and expensive.

materials have been used, the ground has been neither cultivated nor fertilized. If the plow did find its way into the orchard the ground was cropped and part of the plant food removed in pasture or hay crop. Such is the treatment that many orchards have received, and until they get a thorough renovating no good results can be expected. If the rest of the farm was neglected to the extent that our orchards usually are, farming would be unprofitable indeed.

In order to demonstrate clearly how neglected orchards can be made profitable, the Fruit Branch of the Department of Agriculture and the District Representatives for Simcoe county have for

Ford



The Same High Quality At a Lower Price

Ford Model T Touring Car, 4 Cylinders, 5 passengers completely equipped. This splendid car for \$850, F. O. B. Walkerville.

There are several mighty practical reasons why every third motor car made in Canada last year was a FORD—why ever second motor car made in Canada this year will be a FORD Model T.

If you contemplate the purchase of a motor car, does not self interest advise you to investigate why FORD Model T Cars are in such tremendous demand? Prompt delivery on all of the following models:

Ford Model T Touring Car, 4 cylinders, 5 passengers, fully equipped, f. o. b. Walkerville.....	\$ 850
Ford Model T Torpedo, 4 cylinders, 4 passengers, fully equipped, f. o. b. Walkerville.....	\$ 775
Ford Model T Commercial Roadster, 4 cylinders, 4 passengers, removable rumble seat, fully equipped, f. o. b. Walkerville.....	\$ 775
Ford Model T Town Car, (Landaulet) 4 cylinders, 4 passengers, fully equipped, f. o. b. Walkerville.....	\$1100
Ford Model T Delivery Car, capacity 750 pounds merchandise, fully equipped, f. o. b. Walkerville.....	\$ 875

Complete equipment includes Extension Top, Automatic Brass Windshield, Speedometer, Ford Magneto built into the motor, Two 6-inch Gas Lamps, Generator, Three Oil Lamps, Horn and Tools. No Ford Cars sold unequipped.

Write for Catalogue and other Booklets.

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WALKERVILLE, ONTARIO.

Commercial Fertilizers Profitably Used

P. L. Morse, King's Co., N. S.

I believe that there are more commercial fertilizers used in the Annapolis Valley in proportion to its area than in any other agricultural district in America. This is due to the great development that is taking place in the fruit growing industry. Without the use of these fertilizers this development would not be possible. With the setting out of so much orchard on our farms, enough natural fertilizer cannot be produced to properly fertilize the growing trees.

When farmers set out an orchard our capacity to produce natural fertilizer decreases in the same proportion as our acreage of orchard increases as the land that is occupied by the orchard, in the great majority of cases,

monia is applied at the rate of about 100 lbs. an acre, a little previous to blossom time. This gives us a strong luxuriant foliage, which has a very important part to play in the development of the fruit.

THE PROOF OF THE PUNING

It would be folly to say that it does not pay to use artificial fertilizers in the orchard as our results very readily show. A great many of our growers depend altogether on these fertilizers. One of our growers has about 200 acres of orchard, and only keeps one cow and the necessary horses to cultivate the trees. There are acres of orchards in this valley that never get a pound of manure.

It can readily be seen to what an extent we depend on these fertilizers. As cooperation is on the rapid increase in the valley, a large part, if



A Fruit not Excessively Grown but very Profitable

There is a good, profitable market for the luscious thimbleberry; well ripened thimbleberries are attractive to the taste and "sell themselves." A much larger area could be devoted to this fruit without danger of overproduction. In our illustration Mr. J. W. D. Brant Co., Ont., may be seen and a portion of his thimbleberry plantation.

does not produce food for animals to make into manure, especially in the later stages of the orchard development; hence we can see the importance of the use of so much commercial fertilizer.

800 TONS AT ONE STATION

To give an idea of the extent to which these fertilizers are here used, I only need to state that there was handled at this station (Berwick) last spring approximately 800 tons worth at least \$25,000. There will be shipped from this station this season about 150,000 barrels of apples. Our fertilizer bill is therefore quite an item of expense, as practically all this fertilizer goes into the orchards. I do not know what the total import of fertilizer into the whole valley is, but it is safe to say that it is used in the same proportion all over the valley as it is here.

The chief fertilizers used are bone meal, acid phosphate and basic slag to supply phosphoric acid; muriate or sulphate of potash for the potash, and nitrate of soda or sulphate of ammonia for nitrogen.

QUANTITIES APPLIED

Bone meal is applied in the fall or spring at the rate of about 400 to 600 lbs. an acre. Acid phosphate is used to quite an extent, being applied in the spring at about the same rate as the bone. In some cases it has a tendency to sour the land. Basic slag is being used in increasing quantity. It is applied at the rate of about 800 lbs. an acre. It is the cheapest and most available source of phosphoric acid. The potash is applied in the spring at the rate of from 100 to 200 lbs. an acre. I believe the potash is the most important fertilizer we use. Unless we have a sufficient amount the seed cannot develop, the fruit cannot properly mature, and a poorly matured apple is always under colored.

Nitrate of soda or sulphate of am-

monia is applied at the rate of about 100 lbs. an acre, a little previous to blossom time. This gives us a strong luxuriant foliage, which has a very important part to play in the development of the fruit.

A Great Boom in Spraying

(Continued from page 4)

We spray with the wind, always using a good long line of hose, 25 feet, and the whirlpool angle nozzle, which enables us to spray at least two-thirds of the tree from one side. It is then nearly always possible to get a change of wind which will let us finish the tree.

Two years of thorough spraying and cultivating have produced wonderful results in our old neglected orchards. We have just begun to realize that we have been neglecting the most profitable line of agriculture in our county, which is admirably situated for the production of high-class apples.

The lime-sulphur spray has proved to be the great panacea for our troubles with the many insects and diseases that affect the tree and the fruit. Now that a reliable brand of the commercial lime-sulphur can be purchased at a reasonable price, ready to mix with cold water, the fruit grower has no excuse for not spraying. The wonderful increase in spraying in this county is largely due to the fact that commercial lime-sulphur is so easy to use and can be purchased at a very reasonable price.

It is estimated that in the counties of Northumberland and Durham there are a million trees. Of these 400,000 are in bearing and 600,000 still to come into the production of fruit. Orchards of fifty and one hundred acres are common. The orchards on the farms all through the Lake Ontario apple belt will average at least ten acres in size.—W. H. Gibson, Durham Co., Ont.

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Remodel Your Stable Yourself

You can set up BT Stalls yourself. In two hours you can set up 20 stalls. It will save you lots of worry by putting in BT Steel Stalls. No expensive lumber to buy. No high priced carpenters to hire. No delay. The best part of it is when your stable is completed you will have the very best possible sanitary job. There will be no worry afterwards with posts rotting out, partitions breaking and continual repairing.

Don't Wait

Until some dairy inspector gets after you. Make your stable sanitary and healthy and comfortable for your cows. Do it because you wish better conditions—not from compulsion. It will preserve your self-respect and increase your profits.



Our Barn Plans will help you

We go further than supplying the equipment. We will send you complete plans that will meet your needs, no matter what they may be. Get our book, "How to Build a Dairy Barn." It tells you just how to layout your barn, how to ventilate it, how to lay proper cement floors that will not be cold for the cattle to lie on. It gives the proper measurements for cattle stand, gutters, manger, walks and passage way. It will save you time and thought by getting this book. It is free.

What BT Stalls will do for the cow

The protection of your cows is of greater consideration than even price. We want you to get our catalogue. It will tell you all about our patented devices which lessen abortion, do away with the principal causes of big knees, ruined udders and all the injuries which cows are liable to. It tells how our individual mangers prevent overfeeding or underfeeding and save cost. These exclusive features on BT Stalls mean dollars and cents to you, by giving greater comfort and protection to your cows.

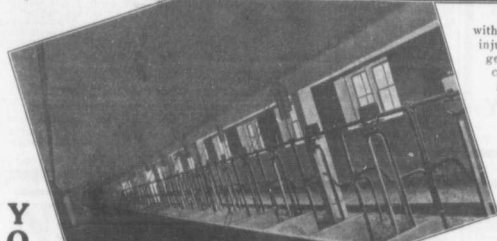
Sanitary Dairy Barns a Necessity

At the last session of our Provincial Government power was given our cities and towns to make laws governing dairymen who sent milk into their respective towns. Already Toronto and Ottawa have passed stringent laws requiring that milk be produced in Sanitary Dairy Barns, and have established a system of inspection. Other cities are preparing similar legislation.

The best dairymen do not need any legislation to compel them to keep their stables in a sanitary condition. They know that by keeping their cows clean they will be more healthy and produce more and better milk. They know that pure dairy products mean better prices.

A Dairy Barn is a permanent investment—one that will pay big returns if properly built—make it right. Put in a stable that will not rot out and have to be changed in a few years, which is certain to be the case if you use old style wood construction. Steel Stalls cost no more than wooden stalls and will pay for themselves in a very short time in the saving of feed and of labour.

Fill out the coupon and we will be pleased to send you full information.



YOU Save Money By Buying BT Stalls

The Out shows the cheapest as well as the most sanitary method of watering your cattle. Our manger lifts out of the way and the cement trough—the manger bottom provides a means of watering your stock. This is much more convenient and easier cleaned than the expensive water-bowl.

The Government Uses BT Equipment

BT Stalls are no experiment. The Dominion Government built three dairy barns last year and put in BT Stalls and Carriers in them all. The different Provincial Governments built some 20 odd dairy barns and in every case BT Equipment was used. Let us send you our book on how the Government built their dairy barn and describing the equipment they use.

Fill out the coupon while you are thinking about it

BEATTY BROS. Fergus, Ont.

We also make Litter Carriers, Hay Carriers, Forks and Slings

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Kindly send me free your Book "How to Build a Dairy Stable," and your Book describing BT Stalls.

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Cut this out now like you would



"Renfrew" Handy Two-Wheel Truck Scales

are essential to the dairyman who is trying to run his dairy farm as an exact business. The fact that this scale is mounted on a truck, makes it both a convenience and a time saver. "Renfrew" Scales are Government tested and the Inspector's Certificate goes with each scale. Each scale is backed by our written guarantee for absolute accuracy and is capable of weighing anything from a single ounce to 2,000 pounds. "Renfrew" Scales are unexcelled.

FOR FARMERS AND DAIRYMEN

Send us a post card with your dealer's name and let us send you a copy of our FREE booklet, "The Profit in the Last Ounce." This book is not a mere scale catalogue by any means; it is virtually a story of exact business methods as applied to farming and tells, not only about the scale itself, but also about a host of uses to

which the scale can be profitably put. Every farmer and dairyman can read this book through at least twice with real profit; the edition is limited, but as long as the supply lasts we will send one to every farmer who writes for it, and tells us his dealer's name. A post card—a single cent—will bring the book to you.

RENFREW SCALE COMPANY
Renfrew, Ontario

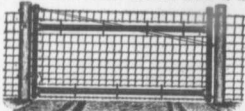


Good Gates on a Farm

add to its value much more than they cost. Among good gates the best is the Clay Steel Gate. It will stand in any fence strain, cannot get out of shape, is an effective barrier against horses, cattle, sheep, pigs and chickens.

Clay Steel Gates

are light, simple, and will last a life time. They can be adjusted without tools to swing over snow in winter. They will not bend, sag or break. The real secret of the won-



derful strength of Clay Gates is the high carbon steel tubing—far stronger than gate pipe, angle, tee iron or steel. Send for illustrated price list, and learn of many other distinctive features.

CANADIAN GATE CO. Limited, 29 Morris St., Guelph, Ont.



CYCLE HATCHER

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FIFTY EGG SIZE \$7.40
L.O.B. Toronto.

We manufacture both Hot Water and Hot Air Incubators; Brooders; Bone Mill; Poultry Remedies. Also Poultry Foods, Nursery Chick Food, Egg Mash, Grit, Shell, Granulated Charcoal—in a word everything needed by Poultrymen.

SEND FOR CATALOGUE.

MODEL INCUBATOR CO.
196 River St., TORONTO, ONT.

POULTRY YARD

To get Healthy Chickens

A. N. Angles, Brome Co., Que.
Do poultry keeping and orcharding go well together? From the experience of years I would answer this question most decidedly in the affirmative. My idea of raising good strong healthy chickens, the kind we want, is to keep them next to nature. There is no place where they can be kept next to nature better than in the orchard. Chickens do better on cultivated than on uncultivated land. As we practice cultivation of the orchard up to July, the chickens have an excellent opportunity of scratching around in their mother earth, and at the same time collecting all of the animal food that they require in the form of worms, insects, etc. To reduce labor, we use movable houses, practice hopper feeding, and have the common barrel device for watering. Were it not that we have to shut the house up at night to keep out skunks and such vermin, we would not need to go near the chickens more than once a week.

We find it well to remove the chickens from the orchard before the apples fall, as we always plan to make use of the wind falls. During the long summer, however, there is everything to be gained, and nothing to be lost by keeping the chickens in the orchard.

Poultry Pointers

The light, gravelly soil, with good natural drainage, is best suited to ducks. It is then much easier to keep the runs and pens in a sanitary condition.

The profits of poultry raising cannot be determined by any one grower, as the cost of grain and the price of chickens and eggs varies according to the market. Each one must ascertain the profits for themselves, taking also into consideration probable losses by disease, hawks, crows, owls, weasels, and stray cats.—Mrs. Annie L. Jack, Chateaugay Co., Que.

The difficulties experienced in spreading poultry manure, on account of its sticky consistency, may be obtained by mixing with loam, peat or common stable manure. For economical use, it should be spread in relatively smaller amounts than other manures. The admixture of lime or wood ashes is not advised, since decomposition is sufficiently rapid without their use.

One of the greatest hindrances to the natural method of incubation and brooding is vermin. In all my experience with incubators, I have never yet had lice on incubator chickens. Where chickens hatched naturally, however, are put in the same brooder with incubator chickens, the whole brood will soon be infested.—W. H. Elford, Peterboro Co., Ont.

Roofs Spread Fires

Recent articles in McClure's Magazine deal with the tremendous and needless fire losses suffered by rural communities because of inflammable roofs. Most fires that spread in such sections attack adjoining buildings by flying brands and wind-borne embers that alight on wooden or other flimsy roofs. Yet those buildings could be made fireproof at their weakest point by the simple and economical method of roofing them with Preston Safe Lock Shingles, made of galvanized metal and thus fireproof as well as wet and weather-proof, yet costing no more than wood shingles in the first place. Data about their value and low cost can be had by asking the makers, The Metal Shingle & Siding Company of Preston, Ontario.

New Idea Manure Spreader Never Clogs

Don't be pestered and made out of sorts by having a spreader that clogs. You don't have to. Get one that spreads wider, even, carries a bigger load and has a score of other advantages—the New Idea.

Send for Book and Special Circulars telling all about the 24 points of superiority, and an account of the great spreader contest on the Hogman's spreader. The New Idea put other spreaders on the scrap heap. Don't think of buying until you know about the spreader that is always ready to give a test of its merits.



Write today and get the facts.

New Idea Spreader Co.
134 Sycamore St., Colwell, Ohio

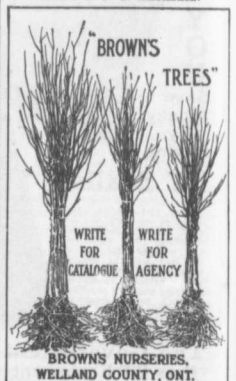
THRASHING MACHINE

London Make (Chalmers) with Johnson Belt-Feeder, Stacker, Stewart Cutting Box and Chaff Flower. A very little care will put it in first class shape for good season's work. Reason for selling: Have dissolved partnership. \$200 will take it—a bargain for someone.
CHR. I. ZEHM, R.R. No. 3 Tavistock, Ont.

G.A.C. No. 21 BARLEY

High class seed from good yield. Listed with the Canadian Seed Growers' Association and grown according to their directions. Won nearly 4 bushels to the acre last year. The best barley you can grow.

Limited quantity. Enquire at once. My own growing in Peterboro County, N. B. STARK, LANG, P.O., ONT. Member C. S. G. Association.



EGGS & BUTTER

Ship your New Laid Eggs and Fresh Dairy Butter to us.
PROMPT RETURNS
EGG CASES SUPPLIED

Established 1854

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HORTICULTURE

Fillers in Orchard Planting

John Beemer, Brant Co., Ont.
When I first started to set apple trees I used for fillers with hardy winter varieties, pears and plums, but have since used apples of varieties that came into bearing at an early age. Pears and plums are at a disadvantage in that they require different treatment than the apple trees among which they are set; also they are sprayed at different times.



No 1. Three Years Growth Lost Here
This tree, located in the orchard of Mr. John Beemer, Brant Co., Ont., is a worked over Spy tree on a Talman stock. Mr. Beemer estimates that in working over the head of the young tree it lost three years' growth.

In the last orchard that I set Spys and Baldwins were planted 40 feet apart each way and fillers, Ontarios and Hubbardsons, 20 feet apart each way. These varieties make very satisfactory fillers, as they come into bearing early and yield heavy crops. Neither variety, however, should be planted for a permanent orchard.

Lime-Sulphur Wins Out.

S. C. Parker, Kings Co., N.S.
In the spring of 1910, 95 per cent. of the spray used in Nova Scotia was Bordeaux; in 1911 the same per cent. of the growers used lime-sulphur. Why this revolution in methods? Bordeaux had been fairly successful in controlling the fungus, but the tendency to russeting under certain conditions, and bordeaux injury to the foliage and fruit was often very obvious. In 1910 a few careful growers used lime-sulphur and the results were so marked that everybody went the same way in 1911. Most of the growers used the commercial brands. Two lime-sulphur plants manufactured several thousand barrels and supplied the trade at a fair price.

BEST FOR SMALL GROWERS

Small growers who want only a few gallons of spray solution had better buy the commercial mixture than to bother with boiling it themselves. However, from practical experience we found no difficulty in making an article just as good as any commercial product. A boiling plant can be fitted up at a cost of a very few dollars, and a good stock solution that will test 28 degrees to 30 degrees Beams, can be prepared in a few hours. The commercial product costs us from 20 to 25 cents per gallon, while the same quality made in a small way can be turned out by the growers at less than half that price.



No. 2. Good Growth on a Original Stock
This Talman tree, planted at the same time and under the same soil conditions as that seen in Fig. No. 1, was not worked over but left to fertilize the Spy tree blossoms. Notice the great difference in growth. These illustrations afford positive proof that it pays to get the stock we want complete from the nursery. —Photos by an editor of Farm and Dairy.

Remarks by Fruit Growers

Neglected fruit trees are not worth the land they occupy. They are an expense, and when pest infested are a positive menace to the neighbourhood.
Peach trees are headed at about eighteen inches from the ground and are not allowed to get over ten feet high. In order to hold them there we prefer cutting back in the summer.—J. W. Smith and Sons, Lincoln Co., Ont.
In the spring of 1910 a blight attacked many of the apple trees in Huron County. This, with other causes, led to the lightest crop of apples known in the county for 20 years. It was noticed that from the

trees that were sprayed nearly all produced some apples and seemed to get over the effects of the blight sooner than the unsprayed trees.—R. R. Sloan, Huron Co., Ont.
In my opinion fruit growers will have to change their ideas of pruning in order to meet the changed conditions. The old idea of thinning out the centre of the trees to let the sunlight in has resulted in many orchards, apple especially, becoming too tall for the care that a tree now has to receive.—J. O. Duke, Essex Co., Ont.

Money in Apples in P. E. I.

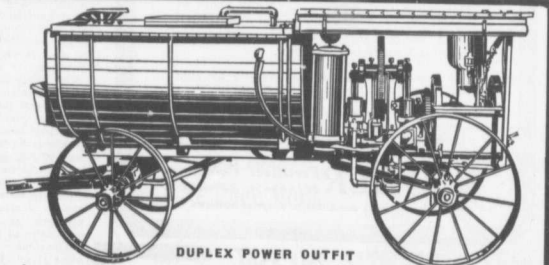
J. A. Moore, P.E.I.

I know a man who stated in public last December that he had harvested a barrel a tree from Wealthys seven years planted. It is not impossible for others to do likewise. These trees can be set out 16 by 20 feet or closer, making 162 trees to the acre. At a barrel a tree and \$3 per barrel this would give \$456 per acre. Of course this is an exceptional case, but just cut it in two and for your five acre orchard you have a revenue of \$1,140 in seven year's time.

Is this not worth trying for? Cultivation, fertilization and thinning the fruit will do it. Then the work is very light compared with other farm work.

Someone may say that if everyone started this work the market would be glutted. The same was said when we started the cheese industry. Why we have not half enough apples on Prince Edward Island to attract a buyer here. The City of Glasgow, Scotland, consumed last year more apples than we will produce for export in the next five years. And just think of the market opening up in Western Canada. No, no, the market will not be glutted.

Niagara Spray
AND
Spray Pumps



Niagara Lime - Sulphur

NIAGARA is the spray that has made possible the growing of perfect fruit in Ontario.

It is an absolutely clear liquid and carries the highest analysis. Every gallon is guaranteed.

It is used and endorsed by nearly every Fruit Growers' Association in Ontario.

NIAGARA is not an experiment.

NIAGARA has been sold in Ontario now for four years and has never failed to demonstrate its merits as an insecticide and fungicide.

Our ARSENATE OF LEAD (Swift's Brand) is the highest grade in the world.

It mixes easiest with water, stays mixed, sticks and kills best.

It is guaranteed to contain 16 per cent. Arsenic Oxide.

Write for our book on "Sprays and How to Use Them." It gives complete instructions, and is free.

We have everything a fruit grower needs; Namely, Lime-Sulphur, Arsenate of Lead, Row Sulphur, Gasoline Engines, Trucks, Hand Pumps, Power Pumps, Tank Fillers, Folding Towers, High Pressure Hose, Spray Rods (Aluminum or Brass Lined), Nozzles, Hydrometers and all Accessories.

DUPLEX POWER OUTFIT

This power outfit is especially designed for medium sized or hill-side orchards. It is a two cylinder pump of large capacity and high pressure. Can be operated with a 1 1/2 or 2 1/2 H.P. engine.

NIAGARA TRIPLEX POWER OUTFIT—a three cylinder pump of large capacity. Will spray at 250 lbs. pressure

GIANT POWER OUTFIT—a three-cylinder pump of still larger capacity. Will spray 9 gallons a minute at 300 lbs. pressure, if desired.

All our pumps have porcelain lined cylinders which are guaranteed for 10 years. These pumps are very simple, very durable, and built for capacity with high pressure.

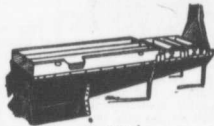
We also have a complete line of hand pumps, from our Magic No. 9, which is the most powerful hand pump made, down to the smallest barrel pump.

Ask for our complete Illustrated Catalogue.

NIAGARA BRAND SPRAY CO. Limited, Burlington, Ont.

OUR OTHER FACTORIES: { Niagara Spray Co., of N.S., Kentville, N.S. Medford Spray Mfg. Co., Medford, Ore. Niagara Sprayer Co., Middleport, N.Y.
Hood River Spray Mfg. Co., Hood River, Ore. Bean Spray Pump Co., Beas, Ohio. Niagara Brand Spray Co., Ltd., Trenton, Ont.
Oregon Spray Co., Portland, Ore.

Let Us Help You Get More Money Out of Your Bush



"Champion" Evaporator

The Grimm Mfg. Co., Ltd., 58 Wellington St., Montreal, Que.

The question is: Are you making good enough syrup? Are you making all you can? Are you losing any sap, which is real money? Place a "Champion" in your sugar camp and you will obtain the very best results with less work.

Great Dairy Annual

to-day about space in this great issue.—Farm and Dairy, Peterboro, Ont.

Giving its authoritative forecasts of the coming dairy season and a vast fund of practical, worth-while information to all dairymen, will be out April 4th. Drop us a line please.—Farm and Dairy, Peterboro, Ont.

For the Land's Sake use Bowker's Fertilizers

They enrich the earth and those who till it. By the use of a good fertilizer, any farmer can add greatly to his profit through raising bigger crops. He can make each of his acres produce more, or he can cultivate fewer acres, and still produce as much as he is getting now, but with less labor and expense. This is a big item, if hired help is scarce.

We have a fertilizer to fit every crop and every pocketbook. Each one is ready to use, and easy to apply. Our catalogue gives full information and directions. Many years of experience in both Canada and the United States, the best facilities, and prompt service are behind every bag we ship.

If we have no agent near your farm, we want one. It pays to sell as well as use our fertilizers.

Write today for our catalogue and calendar. Both will be sent promptly and without cost. If interested, ask for agency proposition, but write anyway for the catalogue.

BOWKER Fertilizer Company,
77 Lyman St., Buffalo, N. Y.
Original and largest manufacturers of special fertilizers.

CONSIDER NOW

what it will cost and how much money you will save on your next season's fertilizer bill if you should buy your

Nitrate of Soda

and other Farm Chemicals and mix them yourself

Your own brand MIXED AT HOME will be better than any patent brand and is sure to have in it just what you want.

Book of formulas and full instructions for Home Mixing will be sent

FREE OF COST

If you will send your name and address on Post Card
Dr. WILLIAM S. MYERS, Director of Chilean Propaganda
17 Madison Avenue, New York NO BRANCH OFFICES

Rhubarb Culture

Prof. W. S. Blair, Macdonald College, Quebec

Ground for rhubarb should be worked deeply at least six to eight inches, and well fertilized. The richer the ground the better the rhubarb. Four or five inches of manure worked in will not be excessive. This plant will, of course, grow on moderately rich ground, but as a rule the one thing lacking in most cases is abundant food material. A friable loam will give the best results. For early rhubarb a southern slope is advisable. Every five years at least the plant should be divided, otherwise the crown gets dense and many small stalks will be formed. The old plant may be lifted and split up with a spade, leaving two to three eyes to a piece. Care should be taken not to break the roots of these pieces any more than possible.

RHUBARB FROM SEED

Seedling plants may be planted, but as a rule these are very variable; and if you have a good strain I would advise division of the roots. Seed of the desired variety may be sown in rows three feet apart early in spring, and thinned to six inches apart, and if the ground is rich these will make fair plants for the next spring planting, or good plants for the following spring.

The plant may be set in the fall or early spring. We set the plants in rows four feet apart and four feet apart in the rows. It is a good plan to mulch the plantation with three to four inches of good rotted manure in the fall, which will be washed in the following spring. Grass should not be allowed to grow, and shallow cultivation should be continued right up to fall, keeping the surface ground loose and friable.

Fertilizers for Potatoes

Does it pay to use fertilizers for potatoes, and if so, how much and what analysis? The above questions are frequently asked, and the answer is more easily given by learning what is used in the great potato growing districts.

On Long Island there is a cooperative association of farmers who buy about 6,000 tons of fertilizer, and the analysis they demand is 5-8-3; the fact that they grow very largely curly potatoes accounts for the high percent. of nitrogen in this mixture. This is also true of the truckers of the Norfolk district, who grow potatoes for the early New York market, and who use as a standard a 7-7-7—seven of nitrogen, seven of phosphoric acid, and seven of potash.

The Ohio Experiment Station in some recent fertilizer experiments obtained the largest yield of acid phosphate, 100 pounds muriate of potash and 80 pounds of nitrate of soda. This material would be equal to about 340 pounds of a 4n-6-10p-10k. goods, which is about the same analysis as Mr. T. T. Martin, West Rush, used. 1,800 pounds to the acre, to produce his yield of an average of 410 bushels on 18 acres—a yield which has probably never been equalled.

Onion Culture

To grow onions from seed for profit we require good ground—preferably sandy loam with loam predominating. We make the soil rich by a heavy coat of manure, or plowing under a crop of red clover. We keep the ground well worked with cultivator or disc the rest of the season, so as to kill all grass roots and foul weeds.

In the fall or early spring we cover the ground again with a fair covering of well rotted manure. As early as

possible in the spring we plow very shallow or work the manure in with disc or cultivator. By so doing we preserve moisture.

PREPARING THE SEED BED

We prepare our seed bed by using a heavy roller, harrow well, then use the plank scraper or light roller. We prefer the scraper as it gives a nice mellow, smooth seed bed. In choosing seed, we select nothing but No. 1 seed, even if the price is somewhat higher, for we then get better results. Yellow Globe and Danvers are our favorites for market, although there is a growing demand for red onions.

We do not sow until the ground is thoroughly warmed up. The seed is sown in drills from 12 to 18 inches apart, as that is sufficient space to work in. When the onions make their appearance we use the wheel hoe; by it we break the crust that sometimes forms, and allow the air to work through the ground. The hoe also kills a great number of small weeds.—A Grower.

Vegetable Jots

Asparagus grows readily from seed. One ounce is sufficient for about 50 feet of drill.

It is time to begin planning the garden for next summer. Select your seeds and order early.

Peppers need a rich sandy loam and frequent cultivation.

Tomato seed should be sown in the frame about 10 weeks before it is safe to set the plants in the open ground. As soon as they are large enough to handle set them out two inches apart in another frame and as they grow stronger transplant again at four inches. This produces short, stocky plants. Every time they are moved increases the chance for earliness.

High, warm, sandy soil and nearness to a large body of water to prevent late spring frosts, is necessary to grow tomatoes and cucumbers for the early market.

Within certain limits, vegetable growing pays in proportion to the amount of manure added to the soil. The green cabbage worm makes in-

THE GATE THAT SERVES YOU BEST



IS THE
Peerless Extra Long Gate

Gate should no longer be looked upon as mere holes in the fence where a bar or any makeshift of an obstruction suffices. It is a Peerless Gate. A good gate is as essential as a good fence.

Ironwork gates are a menace to the lives of stock and crops and should be promptly replaced with Peerless Wire Mesh Gates.

These gates are built of the best materials. Have a frame-work of extra heavy pipe filled with the very best grade of iron. The frames are electrically welded and are air-tight so the water can get in and rust can't. They are braced with one diagonal and a short-rod brace and two cross-braces, making a very strong rigid gate which will not sag.

The frame and mesh is heavily galvanized and will not chip, flake or rust.

Peerless Gates are strong, durable and satisfactory, will look best, wear best, and serve you best. We especially recommend them with Peerless Wire Fencing.

Write for our Catalogue
We also manufacture a new and reliable line of farm and poultry fencing, walk and ornamental gates and fencing.

Agents almost everywhere.
Write five agents in your neighborhood.

Daniels-Bonds Wire Fence Co.
Waukegan, Ill. Hamilton, Ont.

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roads on the cabbage, and cauliflower plants, but it is easily kept in check either by hellebore or para green. The best plan is to mix these ingredients with land plaster or lime and dust a little in the heart of each plant. The hellebore is most satisfactory.

Currants—Varieties and Culture

Currants do well on light clay or heavy gravel loams. The bushes should be planted about six feet apart each way and trained in bush form from



Intercropping Enables the Fruit Man to Make of the Best of a Small Area

Mr. J. W. Clark, Brant Co., Ont., has an income of over \$4,000 a year from poultry, fruit and bees on his 25-acre farm. To do this he must make the best use of every foot of soil. Small berries and bush fruits are grown between the trees in the orchard. Taking two crops necessitates good fertilization, and Mr. Clark is a liberal soil feeder. Our illustration shows a row of currant bushes in the orchard.

at least every other year. They will give a liberal response to good feeding.

Best Varieties of Small Fruits

Grant S. Peart, Halton Co., Ont.

Soil adaptation is an important point to consider when selecting varieties of small fruits for cultivation. Certain varieties seem to do better on heavier soils than lighter soils and vice versa. The Williams strawberry, according to my experience, gives better results on a rich soil inclined to

several shoots, not like a tree. Leading varieties are: Red—Cherry, Fay, Victoria, Wilder, North Star and Prince Albert very late; the others from early to medium—Black—Loo, Naples, Saunders, Champion. White—Grape and Imperial.

At the annual pruning thin out the bushes to eight or nine of the best of the older shoots, cutting away the very oldest wood year after year. Currants should be finely cultivated until the fruit is ripe. Currants should be fertilized with rich stable manure

be heavier than that recommended for strawberries by some growers. On the other hand Berewood seems to produce better berries on a well manured, lighter soil.

In red currant culture the Fay seems to require a heavier and richer soil than the Cherry, while among black varieties the Naples needs a richer and stronger soil than the Looes. The same relationship exists between the Marlboro and Cuthbert raspberries. The former must be fed more liberally with manure to get the best results. The foregoing includes a few of the many examples which may be brought forward as convincing evidence that soil adaptation is an important consideration when setting out a plantation of small fruits.

The Cherry and Fay are our leading varieties of red currants. Both are very productive. The former does better on the lighter soil than the Fay.

Our choice of varieties of gooseberries would be: American—Pearl and Downing; English—White Smith and Industry. The English varieties are subject to mildew, but it can be controlled quite well since the lime-sulphur wash came into common use.

Money for Agriculture

The estimates brought down in the Ontario Legislature contain an appropriation of \$75,000, for a new dining hall at the Ontario Agricultural College, Guelph. There are also appropriations for new dairy stables, \$15,000; purchase of additional land, \$16,500; and for a plant for the development of electrical power, \$10,000.

The Department of Agriculture provides \$2,000 for field crop competitions, which goes to make up \$15,200 for agricultural and horticultural societies. For demonstration farms in northern Ontario there is an amount of \$6,000, with \$8,500 for district representatives of the department. Ontario Agricultural College is benefited to the extent of \$6,630 and the Macdonald Institution by \$1,520.

Trees Grow Better Yield Bumper Crops



BING CHERRY TREE SET IN DYNAMITED HOLE

Without Fertilizer
When
the land has been prepared by STUMPING POWDER

A tree hole can be excavated in an instant with stumping powder. It would take a man an hour to dig it.

And then the spaded hole will be hard all the way down making it difficult for transplanted roots to take hold. This is one of the chief reasons why transplanted trees so often die.

The accompanying illustrations show the wonderful difference in growth in "blown" and hand-dug holes.

Stumping Powder

renders the fertility in the land available. It makes the sub-soil porous allowing root growth. Makes it absorb plenty of water in rainy weather, conserves the water in periods of drought, and this water is the source of the vehicle which carries the plant food. This water in the open, blasted soil is carried to the top by the roots of the plants or trees as needed for their growth.

No need of expensive fertilizers when you use stumping powder.

A whole row of tree holes can be excavated in an instant when charged with Stumping Powder electrically exploded.

OUR FREE

120 Page Book

Illustrated, tells you how to clear land of Stumps and Boulders. How to break up Hardpan, Shale, or Clay Subsoils; and Save Time and Money by using Stumping Powder in digging Cellars, Wells, Drains, Ditches and Reservoirs. Regenerates old worn out farms and makes the fertility in subsoil available to plants.



BING CHERRY TREE SET IN SPADED HOLE

Quite Safe to Use

Our handsome, illustrated Books tells all about it. Send a post card for it to-day. It is free. It shows you many photographs of just how things are done.

Canadian Explosives, Ltd.

HEAD OFFICE - MONTREAL, P. Q.

It Wins in Clover

This picture from actual photo shows Louden Balance Grapple Fork lifting a third of a ton of dry clover hay.

There isn't another fork in the world in its class. It's the only one that can handle clover, alfalfa and threshed straw as successfully as timothy. No dribbling or scattering, with long shaft or short, large load or small.

Louden's BALANCE Grapple Fork

has a patented arch support that gives perfect balance. It takes hold or releases its load at the slightest touch. Simple in design, made of steel with heavy malleable components. Will lift half a ton without bend or break.

Get the LOUDEN, the best hay fork in the world. See it at your dealer's. If he hasn't it don't run chances with any other—write us direct.

Get our complete Free Catalog of Louden Barn Tools, Feed and Litter Carriers, Flexible Bird Proof Door, Langers, Hay Tools, etc. Write now.



MALLORY'S SEED CORN



\$1.10 to \$1.25 per bushel. Returns as our express, if not satisfactory. Samples mailed free on request. **Strawberry Plants \$3.00 per 1,000; Raspberries, 66.00 per 1,000. Blackberries \$2.00 per 100 and up; 150 Strawberry plants at \$1.00, or 200 Strawberry and 30 Red Raspberry Plants sent post paid for \$2.00. **WILD-TOE BLACK CAP**, greatest seller at Experimental farm. Send for Price List.**

N. E. MALLORY, Blenheim, Ont.

20 PACKED FLOWER SEEDS 10¢
15 kinds Aster, 10 Penny, 10 Phlox, Sweet Pea, Bell, 10 Hibiscus, 10 Iris, 10 Poppy, 10 Carnation, 10 Ranunculus, 10 Gladiolus, 10 Verbena, 10 Sweet Alyssum, 10 Marigold, 10 Petunia, 10 Sweet William, 10 Stock, 10 Sweet Pea, 10 Canna, 10 All-Season, 10 Sweet Pea, 10 Canna, 10 All-Season, 10 Sweet Pea, 10 Canna, 10 All-Season. **AMERICAN HUSBANDY, BEDFORD, MASS.**

Speak Quick!

For what O.A.C. Barley you want for your own growing. On 20 acres (okay loan land) last year my No. 11 barley was a first class crop and averaged 47 bushels to the acre.

Price, \$1.4 a bushel (bags extra). I guarantee you satisfaction or your money back. H. R. Nixon, St. George, Ont.

Time to Plant

will soon be here, followed soon by summer heat, when Strawberries and cream are appetizing and refreshing. Plan for them now. We will deliver, postpaid to your address, 100 Strawberry Plants, assorted (early, medium and late), for \$1.00. Order Now. 25 assorted Raspberries or Blackberry bushes, postpaid, for \$1.00. Write for Price List of Fruit Trees, and Small Fruit Plants. Guaranteed. Hardy Northern Garden Stock that will give satisfaction. Direct from the Planter, at less than half of Agent's price.

Brooksie Nurseries
PETITCODIAC, N.B.

A Hot-bed for the Farm

A. H. MacLennan, O.A.C., Guelph
Most of our farmers are missing one of the most tasty additions they could make to their tables. But few of our farmers have a hot-bed. They thus deprive themselves of a means of getting extra early vegetables in their garden. And what tastes better than early vegetables.

The making of a hot-bed is very simple. Fresh horse manure with a fair quantity of straw material should be taken and placed in a pile. The quantity varies according to the size of the hot-bed. About four loads will make enough for a hot-bed to be covered by two ashes, which is plenty large enough for any farm garden. The manure is put in a compact pile. If the weather is cold or fermentation does not begin at once, three or four pails of hot water should be thrown over it. In three or four



Cross Section of Hot Bed

days' time, it will begin to steam and when steaming thoroughly should be turned inside out, that is, the outside of the pile should be put in the centre. After a period of five or six days, it will again heat, when it will be ready for planting in the hot-bed.

CONSTRUCTING THE BED
The manure may be piled on top of the ground, in height from two to three feet, and one foot larger every way than the size of frame which is to go on top of it. The manure should be put in layers about six inches deep and each layer thoroughly pounded down so as to obtain an even distribution of heat. After the manure is carefully piled, the frame is put on it.

This frame may be made from any lumber and of a size to hold two or more sashes. These sashes are ordinarily three feet by six feet, but any storm sash used on the house will serve the purpose. The manure at first will go up in temperature, but will grad-



The Way to get Good Cucumbers

The cucumber seed is planted around the base of the box of manure seen in the illustration and from time to time a seal of water is poured on the manure, thus ensuring against drought and causing a rapid growth and high quality cucumber. Photo taken on the farm of H. E. Nixon, Brant Co., Ont., by an editor of Farm and Dairy.

ually fall, and is ready for use at 80 degrees. After the frame is put on the manure, about six inches of well sifted loamy soil is put in and carefully levelled. In this the seed may be sown.

This hot-bed may be used for growing such early plants as cabbage, celery and tomatoes. The rows of seed should be about four to six inches apart. Many use the hot-bed also to grow early lettuce, radishes and beets. Many growers to-day use small shallow boxes for growing seed and for transplanting, and by this means

save themselves a lot of work outside in bad weather. Hot-beds should be carefully ventilated as necessary and given sufficient water to keep the plants growing.

Abandoned Orchards Made Profitable

(Continued from page 7)
removed, those that point towards the centre of the tree being taken out. Small branches rather than large ones should be taken care to open up the tree. Very high trees should be headed back and new shoots permitted to grow and fill up vacancies on the lower part of the tree.

In the Georgian Bay District, where there is only a small percentage of the second brood of the codling moth, two sprayings have given good results: first, just before the leaf buds open, with commercial lime-sulphur, one gallon to 10 gallons of water or home-made lime-sulphur, specific gravity 1.080; second, just when most of the blossoms have fallen, with commercial lime-sulphur, one gallon to 35 gallons of water, or home-made lime-sulphur, sp. g. 1.002, and two pounds of arsenate of lead. It is well to apply the same solution about two weeks later, especially if there is much damp weather and scab is threatened. Wholly soap, one pound to six gallons of water, will destroy aphids. Twig blight should be cut out and burned. It is essential that trees be well watered. This can be done by applying liberal dressings of farmyard manure to the land and by plowing down crops of clover and other legumes.

CULTIVATION AND SOIL MANAGEMENT
Cultivation is very important. Spring plowing is best except where the land is very heavy clay and cannot be put in good condition if plowed in the spring. Early spring cultivation is necessary to check evaporation of moisture. For the same reason shallow cultivation should be practiced as soon as the land can be worked after every heavy rain until July 1st, when cover crop should be sown. Red clover, cow peas and hairy vetches do well and are preferable to cereals, because they gather nitrogen from the atmosphere and store it in the soil. The cover crop causes the wood to mature so that it will not be injured in winter, and also holds the snow to protect the roots of the trees. After good fruit has been grown it should be carefully graded and packed so that it will present an attractive appearance on the market. The box package is a splendid pack.

Are You Going West this Spring?

If so, take advantage of the remarkably low One-Way second class Colonist Rates to Vancouver, Victoria, Nelson, Spokane, Seattle, Portland, San Francisco, Los Angeles, San Diego, etc., in effect March 1st to April 15th or if Western Canada is your destination, the One-Way second class Settlers' Rates should appeal to you. Settlers' trains to Western Canada will leave Toronto 10.20 p.m., each Tuesday during March and April.

Bear in mind that the Canadian Pacific Railway offers the finest possible equipment and the fastest train service. The route is one of the most scenic in the world. It is the only line operating through standard and tourist sleepers, also dining cars, to Winnipeg and Vancouver, with the most modern compartment observation library cars through the mountains and across Canada on transcontinental trains. By travelling C.P.R. you avoid the necessity of changing depots. All equipment is owned and operated by the C.P.R., affording the highest form of efficiency. If such a trip is under consideration apply to any C.P.R. Agent for full particulars.

did it

Vanco Lime Sulphur Solution

Clean trees mean sound fruit. Spring spraying means fall profits. San Jose Scale, Apple and Pear Scab, Aphid, Fire Blight, Mildew and other Fungi attack fruit trees before the leaves come out. The time to attack them is before they can damage the tender buds. One spraying before the leaf buds burst, and another before the blossoms come out—with perhaps a third when most of the blossoms have fallen—will mean hundreds of dollars profit when the fruit is ready for packing. **"VANCO" LIME SULPHUR SOLUTION** is a true chemical solution of uniform strength and efficiency. It is prepared by scientific men in a scientific way—with the specific gravity on every barrel. It does away with all guess-work—saves the trouble of home-boiling. It is ready for use after mixing with water—has no sediment—sprays easily—and does not clog the nozzle. You get results when you spray with **"VANCO" LIME SULPHUR SOLUTION**—because it is strong, uniform, clear, efficient. **FERTILIZERS**—We are the only house in Canada selling only the straight Fertilizing Chemicals—Nitrate of Soda, Muriate of Potash, Sulphate of Potash and Acid Phosphate. **YOU CAN SAVE FREIGHT** by buying your Fertilizers and Spray Chemicals together, and have all come in one shipment. **WRITE FOR THE "VANCO" BOOK**, and turn the information it will give you into dollars. We'll gladly send you a copy. **CHEMICAL LABORATORIES LIMITED, 150-140 Van Horne St., Toronto.**

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APICULTURE

Double Profit from Bees

A. Smith, Durham Co., Ont.
As an apiarist, I find that we obtain double profit from our bees. We produce tons and tons of honey each year. Aside from this, the bees are invaluable to our orchard and alskie clover. They are double croppers. Through their work in pollinizing the blossoms they ensure us a good set of fruit and an abundant crop of alskie seed. All scientists are agreed that bees and insects are much more efficient agents of pollination than the wind; and of the insects, bees are of



A Good Thing for the Orchard

The belief that bees in the orchard leads to better fertilization of the bloom and better crop of high quality fruit is justified by the experience of many of our most successful orchardists. The apiary here seen was snapped by an editor of Farm and Dairy in the orchard of W. R. Richardson, Haldimand Co., Ont.

the greatest importance in this work. Thoroughly fertilized blossoms produce larger and better shaped fruits.

As bees are quite a study in themselves, if the fruit grower does not understand their care, it might be more satisfactory to get some beekeeper to place a few hives in the orchard. Bees will travel two or three miles from the hive in good weather, but their greatest benefit is obtained in wet, cold and cloudy weather, when it is probable that they will not venture far from the hive.

In this district, wherever bees are kept they have good crops of well shaped apples and heavy yields of alskie clover seed.

Bee-keeping for Fruit Growers

Geo. W. Tebb, Waterloo Co., Ont.
The question has often been asked, "Will it pay to buy bees simply for the benefit to be derived from fertilization of the flowers, and where it is not intended either for lack of time, or because of lack of interest to properly care for them?" I would reply at the outset that it is bad for the bees. They deserve better treatment at our hands, for no other little creature gives such abundant appreciation of, say, ordinary care than do our little pets, the honey bees.

Let our fruit growers note that the "season" is often controlled not so much by the presence of frost or not, as by the fact that dull, blossoming days, when little or no cross fertilization takes place by the aid of nature's carriers, the bees.

I would go just a step further and say to the man who wants to get the very best from his orchard, that bees are not only helpful, but are indispensable. Don't spray your trees when in full blossom and so kill your best friends. Besides, it is a criminal offence in this province. But if you keep bees take care of them, and your wife will say that jars of fruit and jars of honey look very nice on her pantry shelves, side by side.

Profits from N. S. Orchards

P. J. Shaw, Agr. Col., Truro, N.S.
Four acres of bearing orchard at Middletown, N.S., owned by Mr. G. C. Miller have averaged 110 barrels of packed apples per acre for the past 10 years. This orchard has never had any manure. The fertility has been maintained by the use of commercial fertilizers and cover crops. Year before last on account of ill-health, Mr. Miller was compelled to hire all the work done. Below is the account kept with the orchard for that year:

Pruning	\$ 10.00	
Fertilizing 4 acres at \$9	36.00	
Sowing fertilizer	3.00	
Discing and harrowing ..	8.00	
Seed for cover crop	5.70	
Sowing cover crop	1.50	
Spraying three times	22.40	
151 empty barrels at 25c	113.00	
Picking, packing and carting	trucks at 25c	113.00
Sundry expenses	8.40	

451 barrels apples, net pro-
ceeds \$ 320.00
..... \$1,017.74

Net returns

.....	\$ 697.74
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This is almost \$175, net, per acre, or 17-1/2 per cent. for the owner on a valuation of \$1,000 an acre.

An orchard of 25 acres at Lakeville, King's Co., lately bought by the present owner, gave \$3,000 worth of apples just as they came from the tree in 1906, \$3,116 worth in 1907, \$3,150 worth in 1908 and nearly \$5,000 worth in 1909. In an unfavorable year like 1910 this orchard returned the owner \$2,500. There are instances of a single acre returning the owner from \$500 to \$672 in one year.

Summer Pruning

Among horticulturists the summer pruning of fruit trees has become a common practice. If it is done judiciously the plants are sure to be benefited.

The well managed fruit garden requires very little trimming at any season of the year, and the work can probably be more advantageously done now than during the early spring. Neglected trees often require the removal of very large limbs, and the thinning out of numerous interlocking branches. Such extensive pruning in summer would be a disadvantage to the trees. Peach and plum trees have a habit of making a rank growth, and if this is not checked, the plants tend to bear wood rather than fruit. Cutting back the leading shoots immediately has a tendency to throw young trees into earlier bearing.

CUT OUT BLACK KNOT

The black knot appears on plum trees at this season, and should be cut out in its earlier stages. At first it appears as a swelling of the branch. Later it bursts through the bark, and shows a greenish color, which next turns to brown, and then black. Remove and burn all suspicious looking branches.

Apple and pear trees should have all interfering branches cut away, and all diseased or dead wood removed. Do not, however, cut off large limbs from these trees at this time. Dwarf fruit trees should have some of the more rapid growing shoots pinched back to make them acquire the desired form, and to keep them within bounds. Trained fruit trees need constant attention to prevent the side shoots and fruit spurs from developing wood. Cut the leading shoots to grow. The plants are sustained principally through these branches.

First-class fruit in first-class shape will probably create an inquiry for more of the same kind.



**Richly Bred, High Producing
Holsteins**

46 To be Sold at Public Auction
Absolutely Without Reserve

At Farm, GORMLEY, MARCH 14th
26 miles North of Toronto on C.N.R.

I am retiring from farming, and therefore am selling my entire herd.

My offering includes 46 Richly-bred, High-producing Holsteins. My Herd, including Five 2-year-olds, averaged 9,000 lbs. milk last season, milking from 45 up to 84 lbs. each in one day.

Herd is acknowledged by all judges to be second to none in York County. My cattle combine size, good type and constitution, with great producing ability. Write for catalogue giving full particulars.

Butter Girl Beets De Kol, 17 lbs. butter as a senior 3-year-old, is in the sale.

Inka Hengerveld De Kol, sired by Count De Kol Pieterje Paul, my stock Bull, will be sold along with my young stock, most of which is bred from this bull. This bull I got from Brown Bros. He has excellent backing.

Another stock bull, Salvador Cornelius Posch, I have been using, is also in sale. He took 3rd place at Toronto, and many good judges would have placed him first.

All morning trains will be met on day of sale. A catalogue will be mailed you on application. See Stock Notes in this issue of Farm and Dairy.

Embrace this opportunity to buy good young Holsteins.

Col. D. L. PERRY, Columbus, Ohio } Auctioneers
J. L. SAIGEDON, Maple, Ont. } **GEO. FORESTER, Prop.**
GORMLEY, ONT.

**Registered and High Grade
Holsteins**

WILL BE SOLD AT PUBLIC AUCTION

At the residence of FRANK L. BROWN, Elm Grove Farm
First Concession of Elgin, County of Huntingdon

Wednesday, March 20, 1912

Comprising the following stock:

- ELEVEN REGISTERED MILCH COWS
- TWELVE HIGH GRADE MILCH COWS
- ONE REGISTERED BULL, 4 YEARS OLD
- THREE REGISTERED BULLS, 1 YEAR OLD
- THREE REGISTERED BULL CALVES, 6 MONTHS OLD
- A NUMBER OF MALE AND FEMALE CALVES

SALE AT ONE O'CLOCK P.M.

Parties from a distance wishing to attend this sale can take the G. T. R. to Carrs, or the N.Y. Central to Athelstan. Teams will meet passengers.

This is one of the best Stocks in the District. They are all young and in the pink of condition. Terms 6 months' credit.

For further particulars write for catalogue.

ANDREW HILPINS **FRANK L. BROWN**
Auctioneer, HUNTINGDON, Que. **BEITH F.O., Que.**

Put Your Feet in a Pair at Our Risk!

Will Surprise and Delight You With Their Lightness, Neatness and Comfort—Their Almost Unbelievable Durability

We want you to slip your feet into a pair of Steel Shoes—to feel and see and know how much lighter, neater, stronger, more comfortable they are than any other work shoes in existence. Hence we are making this special Free Examination Offer, merely asking a deposit of the price, while you are "sizing up" the shoes. If they fail to convince you immediately you can notify us to send for them at our expense and we will refund your money.

Must Sell Themselves

We ask no favors for Steel Shoes. Compare them with the best all-leather work shoes you can find. You will find that they give them the most rigid inspection inside and out. Let them tell their own story. It was made under, of your own accord, you decide that you must have them.

Better Than The Best All-Leather Work Shoes

Steel Shoes are the strongest and easiest working shoes made. They are more comfortable than in fact than in name. They are made of the best all-leather work shoes. The making is satisfactory. The Steel Shoes are wear-proof and everlasting. They are lighter than all leather work shoes. Steel is breaking in. Comfortable from the first moment you put them on. Impossible to get out of shape. They keep the feet dry. They retain their flexibility in spite of heat, cold or water. They care corners and bunions, prevent chills and rheumatism—no doctor bills and no medicines.

Thousands of Farmers Shout Their Praises

The enthusiasm of users knows no bounds. People can't say enough for their comfort, economy, lightness and amazing durability. The introduction of Steel Shoes in a market where all were leather shoes has created a revolution of opinion. Thousands of farmers are wearing Steel Shoes as a superior substitute for leather. The superior quality of leather can be traced. Wonderfully soft and pliable—never gets stiff. The sole is made of one piece of special light, thin, spring, non-slipping Steel. Soles and linings made with adjustable Steel Rivets, which prevent the bottoms from wearing out. Rivets are replaced with new ones. 30 extra rivets cost only 30 cents and should keep the shoes in good repair for almost two years. No other rivets ever needed! The uppers are tightly joined to the soles in small rivets of rust-resisting metal, so that no water can get between. The soles are fitted with soft, springy, comfortable slat "bunions," which absorb perspiration and colors and aid to ease of walking.



FREE!

For Men—Sizes 5 to 12, 6, 9, 12 and 16 inches High

Steel Shoes, 6 inches high, extra grade of leather, black or tan color, \$3.00 per pair.
Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$4.00 per pair.
Steel Shoes, 12 inches high, extra grade of leather, black or tan color, \$5.00 per pair.

For Boys—Sizes 1 to 4

Boys' Steel Shoes, 6 inches high, \$2.00 per pair.
Boys' Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$3.00 per pair.

N. M. RUTHSTEIN,

The Steel Shoe Man

DEALERS NOTE—Give your customers a square deal by selling these shoes. Write for terms to High Street Shoe Co., Ltd., 65-57 N. Front Street, Toronto. To Western Dealers—Write to George G. Lemay, 25 King Street, Winnipeg, Manitoba.

Overwhelmed by the World-Wide Demand

The success of Steel Shoes is almost startling. Within three years we have established Steel Shoe factories in Pacific, Wis.; Toronto, Canada, and Northampton, England. The great factories, running at full capacity, are scarcely kept up with the demand from all over the world. The only way to satisfy the demand for Steel Shoes is

Good for the Feet! Good for the Health!
Good for the Bank Account!

These shoes are better for the feet, better for the health, better for the pocketbook than heavy work shoes or rubber boots.

You Actually Save \$5 to \$10 a Year

By wearing Steel Shoes. Factory is out for yourself. One pair will outlast 3 or 4 pairs of ordinary work shoes. They save all repair bills and keep your feet in perfect condition.

Free Examination

And Your Money Back Promptly if It Looks Better Than the Shoes!
You see it, go yourself to investigate. Get a pair of Steel Shoes for Free Examination by sending the price, which we returned if you and your own feet are not convinced of their merit.

WHY WAIT? SEND NOW!

No risk! No bother! No obligation! Don't hesitate. Act while this offer is open! Simply state size of shoe you wear, enclose the price and get the shoes by Free Examination.

For general field work we strongly recommend our 6, 9 and 12 inch Steel Shoes at \$3.00 per pair or the 9 inch at \$2.00 per pair. For all classes of work requiring high-top shoes our 12 or 16 inch high Steel Shoes are absolutely indispensable.

United States Factory: Racine, Wisconsin
Great Britain Factory: Northampton, Eng.
DEALERS NOTE—Give your customers a square deal by selling these shoes. Write for terms to High Street Shoe Co., Ltd., 65-57 N. Front Street, Toronto. To Western Dealers—Write to George G. Lemay, 25 King Street, Winnipeg, Manitoba.

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 Freshening Cow

Most of our cows will be coming in in the next month or two. Would it be advisable for us to start feeding them rather heavily from now on, or should they freshen? This is not the general practice amongst dairymen in this neighborhood.

Our best dairymen will agree that just before a cow freshens she should be receiving almost as large rations as she will after freshening when in full milk. We cannot expect to start heavy feeding directly after freshening and have the cow make the best use of the feed. After several months of slack feeding the cow's digestive organs are largely unaccustomed to heavy feeding directly after freshening and a sudden jump to a heavy grain ration will result in a waste of feed, and if the cow is a heavy feeder is apt to result in milk fever.

Given if we did start to gradually increase the rations after the cow freshens, the cow will have to make a great drain on her body to make a large flow of milk, for it is when she first freshens that she needs the greatest amount of food. You can safely start now to bring your cows up to full feed. Directly after freshening the feed ration should be reduced until all danger of milk fever is past, say, three or four days. The cow will then be in a position to make good use of her feed and turn it into milk.

Frequency of Feeding

P. H. Moore, Victoria, B.C.

In making many of the record tests of which we know to-day, where the milking is done three or four times a day, best results are obtained from feeding just as often. Many men in our province are getting good results with their herds when feeding only twice. In the economy of time and labor, this latter is most satisfactory. The time of day and the order of feeding must also be made to suit local conditions, for these differ widely.

One thing that should not be done is to feed, especially hay, just before milking. It is poor economy, because the dust from the hay will get into the milk, and what we lost in quality of the product, from heavy inoculation of this kind, will far outweigh any advantage gained in time saved. Hay and bedding are highly objectionable in this respect. Silage, roots and food of this nature are not so objectionable, but the stable at milking time should be as quiet as possible. It is not the case when feeding is going on.

Dairy Notes

It is impossible to feed the cow to the point of highest economical production unless the feeder is assisted by milk records. By increasing the efficiency of the cow as a milking machine agriculture is greatly strengthened.—E. C. Colback, Cumberland Co., N.S.

A short food supply and the lessened needs of the offspring were formerly incentives for the milk flow to slacken and finally stop. With plenty of food supply and common sense there would seem to be no psychological reason why the production should not keep up until the next fetus becomes of sufficient size to turn the food nutrients from the channels of milk production those of its own development.

Carin

We have foal within directions to colt.—J. G. It is of horse race in full he end the birth tract or f acts as a is not sufficient castor oil. Care should amount of Some m first foal to milk we more than Goad past its absence of stimulate

How to Build a Barn



Why not settle the barn question once for all by building one that won't have to be enlarged, repaired, or remodeled for years to come.

The difference between a good barn—designed for convenience and built to last—and an ordinary barn, is often the difference between profit and loss on the farm. Investigate the subject of barns—a minute of inquiry now may save you dissatisfaction later. All your barn questions are answered in our new book,

"HOW TO BUILD A BARN"

Not just one feature of barn-building, but every—size, materials, erection and cost. Architect's plans, drawn so the layman can understand them, and plain descriptions, guide you in every step of the work. Seven varieties of barns are described. You can't fail to find the type that will exactly fit your requirements. Every detail that you need to know is told, simply, plainly and

thoroughly. The book was published to sell for 50 cents, but we will send it to you free if you will give us your name and address at once.

This book is not a Catalogue. A few pages in the back, however, tell a very interesting story about Galt Steel Shingles, and explain their superiority over wood shingles, other kinds of metallic roofing, and felt sheeting.

GALT ART METAL CO., LTD.

151 STONE ROAD, GALT, ONT.

BRANCHES—General Contractors Supply Co., Halifax, N.S.; Essey & Co., St. John, N.B.; R. CHESTER & Sons, Fredericton, N.B.; J. L. Lachance, Ltd., 253 St. Paul St., Quebec, Que.; Wm. Gray Soss-Campbell, Ltd., 603 St. Paul St., Montreal, Que.; Moutague Soss & Door Factory, Moutague, P.E.I.; Fife Hardware Co., Fort Williams, Ont.; Art Metal Co., Ltd., 839 Henry Ave., Winnipeg, Man.; J. Gorman, Clascay & Grisdley, Ltd., Calgary, Alta.; Giesing, Manclay & Grind-ley, Ltd., Edmonton, Alta.; D. Morrison, 714 Richard St., Vancouver, B.C.

SEND ME YOUR BOOK

FD

Caring for a Young Foal

We have a Clydesdale mare that will foal within the next month. Kindly give directions for the feeding and care of the colt.—J. G. Nipising Dist. Ont.

It is of the highest importance in horse rearing that the young start life in full health and vigor, and to this end the foal should vary soon after birth take a good drink of the colostrum or first milk of the dam. This acts as a purgative. If the colostrum is not sufficient a gentle purgative of castor oil should be administered. Care should be taken to see that the mare supplies it with the proper amount of nourishment.

Some mares, particularly those with first foal and those hard worked, fail to milk well. Feed should be given the mare that will stimulate milk flow. Good pasture grass is the best, but in its absence, oats, rolled barley, or wheat bran with a little corn meal will stimulate milk flow. Some mares on

Our Veterinary Adviser

BREEDING MARE—Is there any danger of having a breeding mare too fat? She runs in yard a while daily. What ration would you recommend just before foaling?—J.R.M., Hastings Co., Ont.

Yes, mares in moderate condition give better results than those either excessively fat or excessively thin. Running in the yard each day is all right provided she moves about. She should take exercise equal to at least four or five miles on the road daily.

Provided the mare is given regular exercise or light work, feed three quartals each of rolled oats and bran, three times daily, and a reasonable quantity of good hay. If there be pasture allow her grass; if not, a few carrots or a mangle or turnip daily is advisable.



A Cow that has Made Good at the Pail

At the Asylum Farm near Hamilton, Ont., is being developed a high class Holstein herd with production the end and aim of the manager, Dr. English. The cow here illustrated, Hazel Maiden Mercedes de Kol, has produced 47 lbs. of milk and 20.72 lbs. of butter in seven days as a three-year-old. She is of the strong constitution, deep-bodied kind.

—Photo by an editor of Farm and Dairy.

The other hand will give too much or too rich milk, causing indigestion. In that case the food allowance of the dam should be restricted.

Diarrhoea brought on by over feeding or inclement weather is a common trouble with young foals. Correctives are flour paste, rice meal gruel, and boiled milk. Constipation, the other common evil, may be removed by the use of castor oil and by injections of warm water to which soap has been added.

Best Feed for Small Pigs

What is the best and cheapest feed to buy for little pigs after weaning? I have some milk. Would you advise feeding wheat shorts for three months?—W. J. T., Norfolk Co., Ont.

Wheat shorts as usually found on the Canadian market are rather coarse for little pigs. I would suggest a mixture of wheat shorts and feed flour, using equal parts by weight; or, better still, a mixture composed of wheat shorts one half, feed flour one quarter, corn meal one eighth, and oatmeal one-eighth; this as a meal mixture to feed along with skim-milk. These meals should be mixed dry and then moistened and made into a thin porridge with about equal parts of skim-milk and water. If the water is warmed in cold weather it will give better satisfaction.

Feeding little pigs immediately after weaning four times a day will give better results than feeding only three times. It is well to be sure that the skim-milk is fed uniformly sweet or uniformly sour. Further, feeding uniformly sour skim-milk will give better results on the average than feeding uniformly sweet milk.

Farmers Have the Power

Winnipeg Tribune

If the farmers stand shoulder to shoulder they are bound to win out. They have right on their side, and right must triumph in the long run. The road to trade liberty may be a long one. There is only one course open to the farmers, namely, to stay on the right road, and smash, whenever the opportunity comes along at the ballot box, the enemies of their freedom.

Have you forgotten to renew your subscriptions to Farm and Dairy.

30 Head Registered 30 HOLSTEINS 30



Will be sold by Auction at
Walliston Dairy Farm

2 Miles south of SCOTLAND, ONT. (Brant Co.)

Wednesday, March 13th, 1912

ONE O'CLOCK SHARP.

20 Cows and Heifers, mostly 3 and 4 years old supposed to be in calf to Laude Cornucopia L-d No. 41169 H.F.H.B. These cows are due to calf in March, April and May.

5 Heifer Calves and 4 yearling Bulls from large producing dams, sired by the stock Bull, which will also be sold. His sire **Aaggie Cornucopia Johanna Lad** has 62 A.R.O. daughters and is a son of **Aaggie Cornucopia Pauline**, who stands as a model producer of the breed, with 34.22 lbs. butter, 7 days, as a 4 year old.

Also 5 High Grade Holstein Cows.

See Stock Notes last issue for fuller particulars.

TERMS:—7 months credit on bankable paper; or 6 per cent. per annum allowed off for cash. Auctioneers decision to be final in all cases of dispute.

Catalogue ready February 26, which may be had on application.

Conveyances will meet the T. H. & B. trains at Scotland at 10 and 12 from the East and 11 a.m. from West on day of Sale. Lunch at noon for those from a distance.

J. H. TAYLOR, Prop., SCOTLAND, ONT.

Col. WELBY ALMAS, Auctioneer.

30 REGISTERED 30 HOLSTEINS 30

To be Sold at Public Auction, in

Tweed, Hastings County March 13th



Included in this sale are cows with milk records of over 70 lbs. a day, bred from such noted strains as **Hengerveld Johanna and Posch**. Nearly all the herd cows are in calf to **Hillcrest Hengerveld, a grandson of Hengerveld deKiel** sire of 115 A.R.O. daughters. This bull along with two others will be sold

Having been breeding pure bred Holsteins for the past 12 years, and always having in view large milk producing strains, I can now offer the public a choice lot of animals at this my first auction sale.

Sale will be held at Turcott's Sale Stables Five minutes walk from railway station

Sale Starts at 1 o'clock sharp, so parties can catch evening train home. Sale, storm or fine as it will be held under cover.

TERMS: Cash or 6 months credit on approved notes at 6 per cent. per annum.

Catalog on application to

G. W. COUNTRYMAN, - Cedar View Stock Farm
C. P. R. and B. of Q. Rys. **TWEED, ONT., Hastings County**

FARM AND DAIRY

AND RURAL HOME

Published by The Rural Publishing Company, Limited.

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 Fruit Raisin and Jersey Cattle Breeders' Associations.

SUBSCRIPTION PRICE, \$1.00 a year, strictly in advance. Single copies, 15c 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.

REMITTANCES should be made by Post Office or Money Order, or Registered Letter. Postage stamps accepted for amounts less than \$1.50. On all checks add 20 cents for exchange fee required at the bank.

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

CIRCULATION STATEMENT

The paid subscriptions to Farm and Dairy exceed 12,500. The actual circulation of each issue, including copies of the paper sent subscribers who are not slightly in arrears, and sample copies, varies from 12,500 to 15,000. No subscribers' names are accepted at less than the full subscription rate for practical articles.

Sworn detailed statements of the circulation of the paper, showing its distribution by counties 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 do not permit to our columns only the most reliable advertisers. Should any subscriber have cause to be dissatisfied with treatment he receives from any of our advertisers, we will investigate the circumstances fully. Should we find reason to believe that any of our advertisers are unreliable in the highest 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 letters to advertisers the words, "I saw your advertisement in Farm and Dairy." Complete names must be mailed to Farm and Dairy within one week from the date of any transaction, transacted, with proofs 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.

ORCHARDS AND LAND VALUES

There is not a surer road to wealth than through the ownership of land that is rapidly increasing in value. Very few of our farmers own land that is increasing in value through the influx of population. We all have it within our power, however, to greatly increase the value of our farms by planting to apple trees. Land that is not worth \$100 an acre in its natural state may yield returns that would make it a profitable investment at \$1,000 an acre when in bearing orchard.

The influence of orchard planting in increasing land values may be illustrated by reference to the Wenatchee Valley in Oregon, mentioned elsewhere in this issue. This valley has an area equal to Prince Edward County. Exclusive of residential property, the average value of the land in the Valley is \$2,500. This abnormally

high value of land is due entirely to the fact that the whole area is devoted to fruit growing, and most of the orchard area is in apples.

There are large areas of land in Canada, from Ontario east, and in British Columbia, just as well adapted to orcharding as is that of the Wenatchee Valley. Although we have to wait several years while the orchard is growing for this increase in value, the land is not idle. Ho crops may be grown in the young orchard that will more than pay the rent of the land, and when in a few years the orchard does come into bearing, we have a source of profit worth while and something that, should we sell the farm, will add immensely to its value. Many of us can with profit follow the example of those Oregon farmers in the Wenatchee Valley and devote a much greater proportion of our farms to orchard.

HONORS WELL PLACED

The University of Saskatchewan has honored itself and Mr. Angus McKay, manager of the Indian Head Experimental Farm, by conferring on Mr. McKay its highest degree. Mr. McKay has well been called "the grand old man of Saskatchewan." For twenty-five years, as manager of the Experimental Farm, he has been a pioneer in progressive methods of agriculture in Western Canada. He had been a progressive investigator, a wise counselor, and a real friend to the farmers of that province. Dry farming of which we hear so much nowadays and which is the system that must be adopted in many parts of Saskatchewan, Mr. McKay advocated years ago. His experiments and their results and his advice, have meant thousands and thousands of dollars to the farmers of Saskatchewan.

Universities and monarchs have in the past conferred their honors on politicians, warriors, distinguished lawyers, and the kings of finance. It is only recently that they have come to recognize that the services of the men who devote themselves to the uplift of agriculture are of as much value to their country as the services of the most distinguished of statesmen. The honor conferred on Mr. C. C. James by King George, and more recently the honor conferred on Mr. McKay, for the services that they have rendered to agriculture are an indication of the growing appreciation that all classes of men are getting of the vast importance of agriculture and of the great work that agricultural leaders are doing for their country.

IT IS A NECESSITY

There is no longer any debate as to the profitableness or advisability of spraying the orchard. We now recognize spraying as a necessity. Apple buyers are refusing to buy fruit from unsprayed orchards. Members of co-operative societies are required by the rules of their associations to spray thoroughly. Legislation also has had a big influence in making spraying necessary, particularly for the export

trade. The requirements of the Fruit Marks Act, whereby apples packed as No. 1 must not contain more than ten per cent of defective apples, and No. 2 more than twenty per cent, necessitates spraying.

We growers must please the consumers, and the people who buy our fruit are getting educated as to what good fruit really is. Fruit that one found a market is not now saleable except to the lowest class of trade and at sacrifice prices. If a grower nowadays will not spray, he might just as well dig up his trees and burn them.

There is no trouble in inducing those who are planting out young orchards to spray. They will do it anyway. In Canada, however, there are thousands of acres of old and neglected orchards that are never sprayed and are not yielding one-fourth the returns that are possible from them. Even these orchards can be made profitable by thorough spraying. Some of the best exhibits at the last Ontario Horticultural Exhibition and also at the New Brunswick Fruit Show were from old orchards that for many years had been neglected. The owners of these orchards are being forced to spray in order to get any returns whatever from their land. This need be no hardship as spraying will pay them well. If spraying is a necessity it is also a paying proposition.

THE IRON AND STEEL BOUNTIES

It is rumored that the bounties paid by the Dominion Government to the iron and steel manufacturers of Canada each year, the renewal of which were so strongly opposed by the farmers' organizations, will be continued by the present government. Under the old rates these bounties were a heavy burden on the Canadian taxpayer. An increase in the bounties is certainly not justifiable.

In discussing the iron and steel bounties in a recent meeting of the Varney Grange, Mr. James Watson stated that more than a million dollars a year had been paid for over fifteen years to "encourage" this industry. "What does that mean?" he asked. "It means two thousand seven hundred and thirty-nine dollars a day for three hundred and sixty-five days in the year for fifteen years. It is equal to the amount realized by selling two hundred farms a year at five thousand dollars each, or a total of three thousand farms at five thousand dollars each. It is equal to the selling price of twenty thousand cattle a year at fifty dollars a head, a total of three hundred thousand cattle. It is equal to one hundred and twenty-five thousand sheep each year at eight dollars a head, a total of 1,875,000 sheep. It is more than equal to 3,000,000 lbs. of butter each year at thirty-three cents a pound, or a total of twenty-two thousand five hundred tons of butter, which if loaded on farmers' wagons at a ton to a load and eighteen feet of road to each, would form a procession seventy-six miles long. The amount granted in bounties is equal to about one

thousand two hundred and fifty dollars a year to every municipality in Ontario."

And this is the load that we farmers are asked to bear in order that a

XIX

You can appreciate some experiences we have on account of our Protective Policy.

Recently we were offered advertisements to run every week averaging about \$8.00 an issue, or over \$400.00 for the year.

These ads. were from an apparently reliable firm, doing a perfectly legitimate business.

But they were objectionable in the nature of the appeal by which they sought to attract trade. So we turned them down.

We realize that A GREAT RESPONSIBILITY IS OURS IN PROTECTING OUR PEOPLE from fraud of any kind, and from propositions having any suggestion of being short of a square fair deal.

We need the money. But we take the slower way of getting it.

Already since the beginning of the new year we have refused Electric Belt, Rheumatism, Patent Medicine and other questionable advertising business, to an extent that would make some men feel rich if they had the money we would have been paid for it.

One advertisement—on a contract for \$140—was run three times. We didn't like it from the start. It was close to the line we draw.

Our chief came round and discussed the matter. He said: "We are better without that." So out it went.

Our advertisers, who are legitimate and reliable appreciate our policy, which precludes the possibility of their advertisements being in this paper with others of a tone and character with which they care not to associate.

Only recently in Hamilton were told by Mr. J. W. Banwell, Manager, Banwell Hoxie Fence Co., Ltd., how much he approved of OUR CLEAN-KEPT ADVERTISING COLUMNS. He informed us of having written another publisher of Farm papers, clipping out an objectionable Electric Belt advertisement and sending it to the publisher with the interrogation, "How do you suppose my advertisement can hope to get results in a paper along with an ad. like that?"

Our people who read Farm and Dairy are constantly expressing their approval of our clean and honest advertising columns. No matter what the immediate cost may be in loss of revenue we shall continue to endeavor to merit their appreciation in regard to THIS WORTH - WHILE FARMERS' PAPER, which because of our policy MERITS AND RECEIVES UNUSUAL CONFIDENCE and is "A Paper Farmers Swear By"

few wealthy dividends on too late to steel bounties organization al denouncing bounty giving our legislators we are not in particular portions, fully favored you: member what you think

GUARANTY

There is a strength and various brand sulphur cones as now upon riation is to ent lists of the Plenty of present situation of fraud. An should be a all commercial

In commerce sulphides that sulfate, which quite useless. improper preparation dominance of the unsuspected spray should be

We have Go fertilizers. We guarantee the stuffs placed u Why required of concentrated touch with the need of stu

BENEFICIAL
Both politicians have shown for the platform appeal self. Mr. Rowell's position, getting a bill making capitalities to lower rate than Ellis, the Com tava, has now bill, giving mun assess improvem

D
DeL

Who Pays The Duty?

Why pay fancy prices for calf meals of foreign manufacture when you can buy CALFINE 15 to 20 dollars a ton cheaper and secure at least equal, and in most cases superior, results? It is now in use on some of the largest and best equipped dairy farms in the Dominion.

CALFINE "The Stockman's Friend"

Has been most carefully experimented with at Macdonald Agricultural College, where it has given excellent results. It is now in use on some of the largest and best equipped dairy farms in the Dominion.

Ask your dealer for a 100lb. bag of CALFINE as a trial—you will soon be back for more. If your dealer does not handle it, write us. We will do the rest.
Feeding directions sent on application.

CANADIAN CEREAL AND MILLING CO., LIMITED
TORONTO, CANADA



—TO—

MANITOBA, ALBERTA SASKATCHEWAN

The only through line
LOW COLONIST RATES

For settlers travelling with livestock and effects

Settlers and families without livestock should use

Special Trains
Will leave Toronto
Each TUESDAY
MARCH and APRIL
10.20 P.M.

Regular Trains
Leaving Toronto
10.20 P.M. Daily
Through Colonist
and Tourist Stopovers

Colonist Cars on all Trains

No charge for berths
Through Trains Toronto to
Winnipeg and West
Ask any C.P.R. Agent for copy of "Settlers' Guide"

SEED OATS

Scottish Chief Oats, large, plump grain, testing 29 lbs. per bush, or better; 90 cts. per bush, sacks included. Daubeny Oats, ripens very early, good sample, a limited quantity at 90c per bush, including sacks.

Alex. A. Watt, Brucefield, Ont.

95 AND UPWARD



AMERICAN SEPARATOR
SENT ON TRIAL FULLY GUARANTEED.
This separator will separate any quality milk, heavy or light cream. It separates any cream, which makes a rich, creamy milk. It is made of the best material, and is easily cleaned. It is made in Toronto, Ont. Write for literature to H. S. BAKER, 1822, N. Y. ST. AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y.

Creamery Department

Butter makers are invited to send contributions to this department, to ask questions, to give reliable information, to make suggestions for butter making and to suggest subjects for discussion. Address letters to Creamery Department.

The Why of Cream Testing

L. A. Zupfel, Eastern Dairy School, Kingston
The object of testing the cream for fat at the creameries is to establish a basis for the equitable division of the proceeds of the sale of the butter among the various patrons who supply the cream. As fat is the only portion of the cream or milk which enters into the composition of butter (excepting, of course, the very small amount of casein which may be present), undoubtedly then the amount of fat which these contain determines their value for butter production.

Cream is simply the fat globules of the milk gathered together into a smaller bulk. Butter is a still greater compression of these fat globules or the entire expulsion of the remaining portions of the milk, leaving a substance which we call butter, the composition of which is, roughly speaking, 85 per cent. fat, 12 per cent. moisture and three per cent. salt and curd. It is quite evident from the foregoing that the amount of fat which the cream contains (all other conditions being equal) determines its value for butter making. This being so, it is of the utmost importance to determine accurately what this portion of fat is.

I would strongly urge that the following points be observed in order to have accurate results: First, the sample taken should be as nearly as possible representative both of the quality and quantity; second, the jars should be kept tightly corked; third, the samples should be weighed, not measured, when making the test.

If the foregoing three cardinal points be observed in conducting a test, very little room is left for error if the operator be not reasonably careful in the other operations, and the end for which the test is made will be achieved, viz.: an accurate basis on which to apportion the proceeds from the creamery.

A Creamery Decalogue

1. Thou shalt keep thy cream sweet and in a cool place.
2. Thou shalt not say that thy cream separator and cows are clean enough, but wash them before using them.
3. Thou shalt not keep thy cream can for a fly mousetrap, but cover the can up.
4. Thou shalt remember thy cream days and come with thy cream to the creamery.
5. Thou shalt not take more than thy share of buttermilk, so thy neighbor will say that one hog haulest food for another.
6. Thou shalt not say thy butter-maker is stealing and do so thyself.
7. Thou shalt not say that thy test is not high enough when thou art putting skimmilk or water in thy cream.
8. Thou shalt not go to thy neighbor and kick about thy butter-maker, but come to the creamery with thy kicks.
9. Thou shalt not make butter at home that weighs but 13 ounces to the pound and say thou canst make more butter than thy butter-maker.
10. Thou shalt not tell falsehoods about thy butter-maker, as he has a reputation to keep up as well as thyself.

To Secure Uniform Salting

Prof. H. H. Dean, O.A.C., Guelph
Buttermakers frequently find difficulty in obtaining a uniform salt content in the finished butter. As the result of a number of tests we found that the addition of five per cent. salt to different churnings caused a variation of 2.8 to 4.2 per cent. salt in the finished butter. The moisture content of the butter varied from 12.9 to 15.5 per cent.

In order to obtain uniform results, the fat content of each churning should be known and the butter calculated as accurately as possible. The butter should be drained of its surplus mixture in the churn, and the salt accurately weighed. If a preservative be used, allowance should be made for the salt that it is likely to contain, which may be from 15 to 38 per cent.

More Cleanliness Needed

F. R. Harriid, Huron Co., Ont.
Where cows are milked, the cream separated and then put in the pantry or kitchen (which I know is often done), has results most to be feared. It is not the right way to produce good cream. Numerous flavors are accessible to the cream from the pantry or kitchen which the cream will readily take up.
The cream should be kept in a clean, cool place (a temperature of 58 degrees F.) at all times of the year, but never let it freeze, as the cream hater cannot then take an accurate sample, and besides it is detrimental to the cream.
WASH TWICE A DAY

Another important thing to be observed is the washing of the separator, which too many of our farmers neglect. As a rule the farmer's wife, hired girl or boy, attends to the washing of the separator. This is all right when well done, but I know of several cases where the separator is washed only once a day. The machine should be washed every time it is used.

In creameries the utensils are washed twice for each time used, once after using and again before using. This is to ensure cleanliness. If our farmers will take this hint, the results would be better cream, better butter and higher prices.

Accuracy Above All Else

Words of trouble have been caused and many a creamery and factory ruined by carelessness in weighing and testing of milk and cream and in making mistakes in calculating dividends. Patrons as a rule are naturally more or less suspicious, and when a mistake is made inadvertently the patron is likely to consider it as a deliberate "cheat."

Knowing this, it behooves the maker to be extremely careful in giving accurate weights and figures. A shortage of one pound of milk means little financially to the farmer, but it is sufficient to lead him to look with suspicion upon the conduct of the entire affairs of the creamery. Imagine your going to the grocery for a pound of sugar, and on weighing it found you got only 14 ounces. You will probably buy your sugar elsewhere in the future. The patron who finds his cream or milk lighter than a pound, is likely to send it elsewhere or will cast reflections upon the honesty of the creamery's transactions.

Inaccuracy in calculating dividends breeds dissatisfaction among the patrons. Rather than run the risk of a single mistake, it will pay to run over the entire figures again. Accuracy in figures is one of the first principles recognized by business men

everywhere. They realize the full utility of building up a business with accuracy in figures is lacking. This is no less true in running a creamery or cheese factory than in any other business.—Butter, Cheese and Egg Journal.

Dairy Notes

Last year was the most successful dairy season we have ever had in Saskatchewan. During any one of the summer months of June, July and August we produced more butter than during the whole season three years ago.—Dairy Commissioner W. A. Wilson, Regina, Sask.

Paying for cream on a quality basis would be all right if a bookkeeper was kept at the creamery. It would complicate my business greatly to pay two prices for butter fat. The most of our cream comes in every day, and it is in good condition. Such a plan would, however, cut out thin cream.—W. Waddell, Middlesex Co., Ont.
Cream testing 40 per cent. with the pipette will test 41 per cent. with the scales. We should not cut a patron 50 cts. on a hundred pounds of cream for sending a rich cream when that is what we want, although 40 per cent. is perhaps a little too rich.—Mack Robertson, Perth Co., Ont.

Complete Butter Plant FOR SALE

1 100 gal. drum) Success Churn and Worker, C. Richardson's make, St. Mary's. Used only 18 months. Is in best condition.
1 Refrigerator, large size, 2 ft. by 3 ft. by 4 ft. inside.
1 Cowsby H.P. Horizontal Stationary Butter.
1 Big H.P. Leonard Engine, set on base with boiler.
1 Water Tank, Beta, Shaft, and Pulley.
1 Milk Separator, H.P. Separator, Season for selling. One out of butter making. AND WILL RELIABLE. For full particulars apply to
C.W.D. J. ZEHR, R.R. No. 5 Tavistock, Ont.

Farm Help AND Domestic Servants

Can be had on application to the
Salvation Army Immigration and Colonization Dept.
Head Office, 22 Albert St., Toronto, Ont.
Our men have given satisfaction. We bring out the best class of men and take care in the placing of them.

GRAND TRUNK RAILWAY SYSTEM

Low Rates To PACIFIC COAST

MARCH 1 to APRIL 15

—TO—
Spokane, Wash. Nelson, B.C.
Seattle, Wash. San Francisco, Cal.
Vancouver, B.C. Los Angeles, Cal.
Victoria, B.C. San Diego, Cal.
Portland, Ore. Mexico City, Mex.

Proportionate rates from other points in Ontario.

THE POPULAR ROUTE TO
WESTERN CANADA
VIA CHICAGO
The Grand Trunk Pacific Railway, short cut line, fastest time, finest service between Winnipeg, Saskatoon and Edmonton.
For full particulars and tickets call at Grand Trunk Agents.

Cheese

Makers are in the to this department. Suggest subjects for discussion. Address letters to Creamery Department.

Education for

B. A. Ruddick
My idea of good milk to forcing them among cheese able them to educational of among my possible. I know have their own willing to take their milk. It go around and consider it is a it pays well.



The cheese factories are met and in quantities former date equipment co-

The milk bell and I look at it whether or not milk. I as a chemist have good cheese. It is hard to take care of to him. A better plate for making a business, but then all you can national work co-

EASY TO

We are particular about education rural mail delivery phone enable communication with them want any improvement that they they them.
Bad milk, how fued. When I first I had to refer. In a more often we had the rural.

CHEESE

FOR SALE
Centrally located, and railway cream gathering system and supply quilting.
Apply FARM AND PETER

Cheese Making
Gang Steel Press
Large cheese. Six 5 Stilton Hoops for 80, including 3 Bands; plate for making 100 lbs. good Press. This good as new; used in making 10-pound cheese 400 Also, 100 lbs. used 3 months.
A. KEILLOR

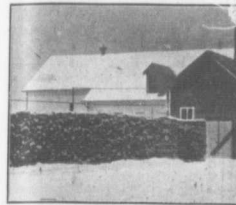
Cheese Department

Makers are invited to send contributions to this department, to ask questions and suggest subjects for discussion. Address all communications to the Cheese Maker's Department.

Education for Careless Patrons

B. A. Ruddick, Northumberland Co., Ont.

My idea of inducing patrons to send good milk to the factory is not by forcing them into it by combines among cheese makers which will enable them to refuse poor milk but by educational effect. I like to get out among my patrons as much as possible. I know their men all personally, have their confidence, and they are willing to take advice on the care of their milk. It takes a lot of time to go around and see the patrons, but I consider it is a part of my duties and it pays well.



Quiet Now but Just Wait a Couple of Months

The cheese factory at Perth, Lanark Co., Ont., here illustrated, is one of the new factories of Eastern Ontario. It is decidedly above the average in equipment and in quantity of milk. The latter is an important point. In the small factories common in some sections of Eastern Ontario and Quebec good, up-to-date equipment cannot be afforded and a poor quality of cheese results.

The milk belongs to the patrons, and I look at it as their own business whether or not they send in good milk. I as a cheese maker, however, must have good milk to make good cheese. It is hard to compel a man to take care of a thing that belongs to him. A better plan is to let them know that you consider it their own business, but that you wish to help them all you can. That is where educational work comes in.

EASY TO KEEP IN TOUCH

We are particularly well situated for educational work. Free rural mail delivery and the rural phone enable me to get into communication with them readily whenever I want any improvements made, and I find that they are willing to make them.

Had milk, however, should be refused. When I came to this factory first I had to refuse as much as 3,000 lbs. in one morning. That was before we had the rural phone, but I never

CHEESE FACTORY FOR SALE OR TO LET

Centrally located, near thriving village on railway. Excellent territory for cream gathering system.

Apply FARM AND DAIRY, BOX 209, PETERBORO, ONT.

Cheese Making Outfit - For Sale

Long Steel Press, Richardson make, for large cheese. Six 14 $\frac{1}{2}$ inch large Hoops; 3 Milton Hoops for 10-lb. cheese; diameter 9 $\frac{1}{2}$ inches; 3 Sanders. Everything complete for making 15-pound cheese. Rack in sets for making practically as good as new; using very little, good money in making 15-pound cheese for sale, very cheap. Also, one Bernard Hand-curd Mill, used 3 months, \$5.

A. KEILLOR - Wallacetown, P. O.

refused milk without writing the patrons or seeing them and letting them know what the trouble was. I have now been here three years, and it is not a very common thing to have to refuse milk. Milk should also be in early in the morning before the heat of the day. My contract states that all milk must be in by eight o'clock and the contracts with the milk drawers have the same provision.

Experiments in Salting Curds

Frank Hens, Chief Dairy Instructor for Western Ontario

Buyers frequently call attention to the fact that some makers are inclined to apply more salt to the curds than is necessary during the warm weather. When the curing rooms are very warm, makers can hardly be blamed for salting sufficiently to keep the cheese close, but this may be overdone. At the District Meeting in 1910 during a discussion of this sub-

ject it was suggested that experiments be made on this point at the Dairy School and under factory conditions.

On July 29th one vat containing 7,338 lbs. of milk was taken for the experiment. This made 876 lbs. of curd, which was evenly divided into four lots of 219 lbs. each. These lots of curd were salted respectively: 2-1-4, 2-1-2 and 2-3-4 lbs. of salt per 1,000 lbs. of milk. Each lot of curd was again divided at the time of going to press, making two cheese each, in all eight cheese. Four of these cheese representing different amounts of salt were taken direct from the press the following day to the cool curing room and held at an average temperature of about 60 degrees. The other four curd were salted respectively: 2-1-4, 2-1-2 and 2-3-4 lbs. of salt per 1,000 lbs. of milk. These cheese were weighed when taken from the press and again in 15 days and the shrinkage under both methods of curing calculated. They were scored by experts on August 18th and on October 4th, and the average of these scores taken. Samples for moisture and fat were taken at different times. Briefly the results are as follows:

SUMMARY

- 1.—The cheese salted two pounds per 1,000 pounds of milk and held in the ordinary curing room for 15 days were decidedly off in flavor, while the duplicate cheese placed at once in the cool curing room retained its flavor almost as well as those salted higher.
- 2.—The cheese salted 2-3-4 lbs. in no case better in flavor, while the texture was crumbly and inferior to those salted 2-1-4 and 2-1-2 lbs.
- 3.—The score of the cheese indicated that 2-1-4 lbs. was about as in-

fective as 2-1-2 lbs. and superior to 2-3-4 lbs.

4.—The cheese salted two pounds scored slightly higher, but this was only true of those put in the cool curing room at once.

5.—There was a slightly greater loss in pressing, and it took slightly more pounds of milk to make a pound of cheese from the curd salted 2-3-4 lbs.

COOL CURING SAVES SHRINKAGE

6.—There was a decidedly greater shrinkage in weight of cheese held in the factory curing room for 15 days compared with those placed in the cool curing room for the same length of time.

7.—The per cent. of moisture was slightly less in the high salted cheese, while the per cent. of fat was slightly higher.

8.—There was a decided difference in the quality in favor of the cheese (especially flavor and texture) placed in the cool curing room at once, compared with the duplicate cheese held in the factory curing room for 15 days.

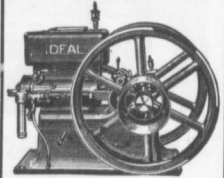
9.—This work indicates that it is not advisable to over-salt curds during warm weather. It is well, however, to point out that it is possible to go too far the other way and under-salt the curds, especially when the cheese have to be placed in curing rooms, the temperature of which goes far too high and over which the maker has no control. Good judgment must be exercised at all times on this point.

Farm and Dairy has done more to improve the condition of cheese makers than any other paper. — R. W. Ward, Dairy Instructor, Peterboro Co., Ont.

Milk will keep from Saturday night until Monday morning if cooled to 55 degrees. There is no benefit in stirring milk. If stirred with a proper implement I have no objection to it. The only advantage is that the milk will be cooled a little quicker but not quick enough to make it pay.

GASOLINE ENGINES

1 $\frac{1}{2}$ to 50 H. P. Stationary Mounted and Tractor

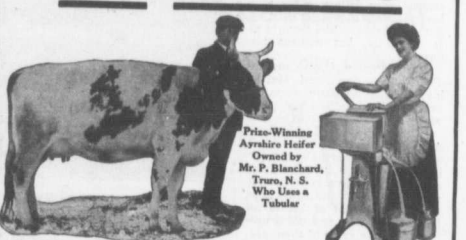


WINDMILLS
Grain Grinders, Water Boxes, Steel Saw Frames, Pumps, Tanks, Etc.
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SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS

ANY person who is the sole head of a family, or any male over 18 years old may homestead a quarter section of unalienated 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 Agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader. 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 80 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 alongside his homestead. Price \$1.00 per acre. Duties—Must reside upon the homestead or pre-emption six months in each of three years from date of cultured to earn homestead patent) and cultivate fifty acres extra. A homesteader who has exhausted his homestead right and cannot obtain a pre-emption, may enter for a purchased per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a building worth \$300.00. W. W. COOLEY, Deputy of the Minister of the Interior. N. B.—Unauthorized publication of this advertisement will not be paid for.

THE WINNERS



Prize-Winning Ayrshire Heifer Owned by Mr. P. Blanchard, Truro, N. S., Who Uses Tubular

Dairymen making the most money realize that it pays them well to use only high producing cows and the highest producing cream separator. That is why Mr. P. Blanchard, successful dairyman and popular agricultural speaker of Truro, N. S., who owns the prize-winning Ayrshire heifer shown above, uses and recommends the

SHARPLES Tubular Cream Separator

Mr. Blanchard is but one of many who are equally businesslike and use Sharple's exclusively. Tubulars are prize-winners. Here twice the amount of cream from the same milk and twice as much milk to stop or "bain" the cream or give it a mottled flavor. By producing the best cream and the most cream, Tubulars make more money for other separators get. This extra profit is simply Tubular "value" which Tubulars make for other separators and will make for you.

Ask for Catalog No. 10 and our book, "Best Dairy Practices," Both FREE. **THE SHARPLES SEPARATOR CO.** Toronto, Ont. Winnipeg, Man.



To keep one's foot set firmly in the way that leads upwards, however dark and thorny it may be at the moment, is to conquer.

—Lillian Whiting.

The Second Chance

(Copyrighted)

NELLIE L. McCLUNG

Author of "Sowing Seeds in Daffy"

(Continued from last week)

Pearl, the oldest daughter of John Watson, a C. P. R. section man in Millford, Mass., receives a sum of money and starts in to educate herself and the rest of the family. She proves a clever scholar but seeing that her small brothers are getting into bad habits in town suggests moving the family on to a farm. We are next introduced to the children at a country school. Tom Steadman, a bully, is thrashed by Bud Perkins for striking Libby Ann Cavers. The Watsons again take up their education at the country school. At the Pioneer Picnic, Bill Cavers, father of Libby Ann, gets drunk and is found dead. Sandy Braden, the hotel keeper, deeply affected, closes up his saloon in consequence. Mr. Perkins plugs his grain with frozen wheat and Bud gets the blame. He leaves home. Mr. Perkins' daughter, Martha, is in love with a young Englishman on a neighboring farm, Arthur Wrentham. Arthur is engaged to an English girl, who is shortly to come out and join him in his new home.

THE arrangements for Arthur's wedding were all made. Thursa was coming the first of December and would stay with Martha until Christmas Day. Arthur's house was not quite ready yet. Martha, glad to feel that she was of any service to him, made great preparations for the coming of Thursa.

Her own bedroom, which was to be used by Thursa, was repapered and painted; the new rag carpet that Martha had put away in her cupboard "in case" was put on the floor; new lace curtains, bought out of the butter money replaced the frilled art muslin that had been at the windows. Martha's best pin-cushion, her best stand-covers and pillow-shams, were all brought out for Thursa's use. It seemed very fitting to her that her treasures should be used by Arthur's bride. She thought of all this sadly, but without bitterness.

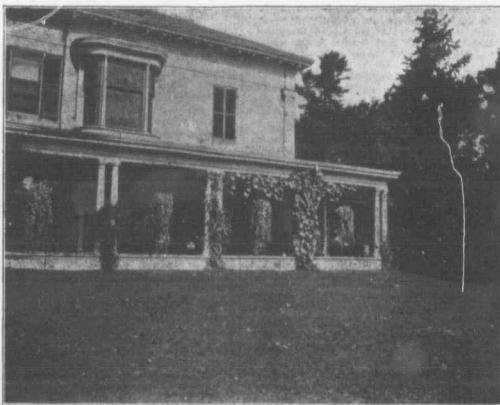
One afternoon Aunt Kate and Pearl came home, and Martha invited them to come upstairs and see the room she had made ready for Thursa.

"Upon my word, Martha," Aunt Kate said, as she looked admiringly at Martha's tastefully arranged room, "you're fixin' up as if you were goin' to get married yourself, and I just hope this English girl of his is all he thinks she is, and not a useless tool, like some of them are. I mind well one Englishwoman who lived neighbor to me down in Ontario, nice woman, too, but she akes alive, she was a dirty housekeeper. She was a cousin to the Duke of something, but she'd make a puddin' in the wash-basin just the same. I'd hate awful to see a girl get a girl like that. I suppose you haven't heard him say whether she's been brought up thrifty. It means a lot, let me tell you. I've seen women that could throw out as much at the back door as their own could bring in the front. You don't know, do you, whether or not she'savin'?"

"I don't know, I'm sure," Martha said. "I don't think she has much experience, but she can learn. It's no trick to do housework."

"Well, now, Martha, you're

wrong, for it is a trick," Aunt Kate said positively. "It's the finest thing a woman can know. A man will get tired of a pretty face, but not of good virtues."



This Veranda Owes Much of its Pleasing Effect to the Hanging Baskets.

(See article by Mr. A. H. Ewing on page 23)

Aunt Kate went downstairs then to help Mrs. Perkins do some sewing, and Pearl and Martha were left alone.

"It's awful good of you, Martha, to help Arthur's wedding along so well," Pearl said, "but I know you are glad to do it. People ought to be kind to any one that's gettin' married, I do think. They need flowers and kind things about them far more than people do when they are gettin' buried. Pah! When a person's dead they're clean out of the bush and not needin' help from any one; but gettin' married is awful. Ma saved the lilacs she had when she was married, and put them in a gem-jar, and I've often heard her tell what a comfort they

were to her when she came home all tired and couldn't get the stains out of some one's tablecloth. She had a piece of the cake, too, sealed up in a vaseline jar, and the very maddest ever saw Ma was when she found Danny eatin' it—he et her clove apple the same day, and we couldn't do a thing to him because it was his birthday."

Martha looked at Pearl wonderingly. There were no dried lilacs or sealed vaseline jars in her family, but she understood vaguely what it might mean.

"You are going to be the Bride-maid, Pearl?" Martha said. "Arthur told me so!"

"Oh, good!" Pearl cried, but a sudden thought occurring to her, she said, "You should be it yourself, Martha. Why don't you?"

"I'll tell you why, Pearl," said Martha. "I would look awful beside Thursa. She is fair and ruff-haired, and she'd make me look worse than usual. Arthur asked me, but I told him I couldn't very well. Anyway, there is the gravy to make and the pudding-sauce, and I'll have to be right there over it. You'll do it, won't you, Pearl?"

"Oh, yes, I'll do it," said Pearl. "Sure thing. Glad of the chance to wear the white dress Camilla made me and my bracelet—and—and all!" She was about to ask Martha a question, but changed her mind suddenly and went on: "I just hope there'll be a lovely blue sky and snow on the ground and a real clearin' sunshine, like what Christmas ought to be, with everything so lovely that it just hurths, and so much Christmas in it that you're dead sure the air is full of angels. And, Martha, we'll put

it a wonder she don't come bustin'! You'd think she'd be as far as one anxious to see him than any other. She's seen loads of stores, and she hasn't seen him for two years. Say, Martha, there was an English point-ster in Millford when she lived here or she sent home for his girl, and comin' on the boat didn't she meet another fellow who liked better and she up and married him. Wouldn't it be awful if Thursa was to do that after Arthur gettin' all ready, too?"

Martha did not answer, and Pearl, looking up, was startled at the expression of her face of a shipwrecked sailor who has been looking, looking, looking over a desolate waste of water, dreaming of hope, but never daring to hope, when suddenly, before his weary eyes there flashes a sail! Of course, it may not be a sail at all, and even if it is a boat it may never come, so the shipwrecked sailor, but still a great hope leaps into his face!

Pearl said it all in Martha's face in that moment, she remembered Martha's saying that often when she sat at her embroidery she imagined foolish things that could never come true.

"Isn't she a brize?" Pearl thought to herself. "Gettin' ready for this wedding just as cheerful as if her heart wasn't breakin'!" Then Pearl, in her quick imagination, ran over a new question: "Just like if it was me gettin' ready for Miss Morrize to marry—?" She stopped and thought, with a stern look on her face. Then she said, to herself grimly: "I believe this is the greatest piece of Tom Cavers' I've seen yet, and if it is, then I haven't got a small bit of it."

"No word from Bud, is there, Martha?" Pearl asked after a while.

"Nothin', only the card from Calester, saying he was working on a horse ranch west of here. It's lonely without him, I tell you, Pearl. I wonder will he ever come back?" said Miss Morrize, wistfully.

"Sure he will!" cried Pearl. "Bud'll come back, and it will all be cleared up, and don't you forget it!"

"I don't know how, Pearl." "Some way we don't expect maybe, but it'll all come right. Everything will be in time," Pearl answered cheerfully.

At ten-time the conversation naturally turned to wedding. Mr. Perkins had been in a doubtful frame of mind until the visit Mrs. Perkins came, but under the stimulus of fresh listeners her thoughts were cleared up. He had been at the wedding, which came back to him as with great vividness, was his friend, Ned Mullins, married the Spain girl down "Otway."

"Ned had intended to marry the youngest one," he said, "but she got away by Jinks, there she was, the best one, all decked up with ribbons and—jij—like a lady of chips, while the pretty one, Rose that Ned wanted, was sittin' in the hold, searching for a man to call the family—she'd take them as they come, by Gosh, wouldn't it have broke up, if she'd—she seemed to know which way the evidence would run. The time she took Ned aside; I can bear it yet the way she said, 'Marry the Ned, me boy; the Spain girl's had numerous for us! We mustn't be had bad will them!'"

(To be continued)

A good man sure of the his things; and evil treasure things.—St. M.

When our h have no fear things unkind or anything th wound or inju of any us are il tempers, or to speak unki accomplish lastin do not realiz that is neede hearts.

If not placd in tion rockeries into very different grounds around have the advanta and easily care.

Our hearts ar a river. The whole stream wit hearts are sinf words and acts as it is necessary in a river shall stream can be clear that the ch shall be changed to conquer our si

Christ had a pe to the roots of hearts of the p Him. The mask hypocrites, and the just was revs sins were laid bare was the case wit ruler. Christ lo and saw that wh in other respect wealth more th Therefore, in ord see his sin, He sell all that he has, and like a in the young man ed and he went cause he had gr tested him and l

And just as Chr ruler so He tests we are to pray for Well He knows th fulfill His comman without searchin the discoverin of which we have He has told us th forgiven for our si

The Upward Look

Our Hearts Must be Right

A good man out of the good treasure of the heart bringeth forth good things; and an evil man out of the evil treasure bringeth forth evil things.—St. Matthew xii. 35.

When our hearts are right we need have no fear that we will say cross things, unkind things, profane things or anything that will displease God or wound or injure our fellow-men. If any of us are striving to overcome our ill tempers, our pride, our proneness to speak unkindly we will fail to accomplish lasting results as long as we do not realize that the reformation that is needed must start in our hearts.

give others, who may have wronged us, for their sins. Again it is in order that we may see, as we struggle to forgive others, how black and unloving are our own hearts and how great is our need of forgiveness.

Christ has told us that we must be willing to take up our cross and follow Him. This command, also, was given to test our love and faith. He does not want as His disciples those who will follow Him only as long as the path is strewn with roses. He desires, above all things, that our love shall be sincere, and thus He tests it in order that we may see our weakness and need.

When, however, our hearts are right with God we need not fear His tests. They will but serve to strengthen our love by affording us opportunities to prove it. And should we fail to ring true it will be only because evil, having gained entrance into our hearts, is bearing fruit in our lives. Our hearts determine how we stand with God. We should, therefore, ask God to help us to examine them so that we may, by His aid, expel all evil and, like the good man in our text, bring forth good treasure therefrom.—I. H. N.

Hanging Baskets

A. H. Eving, Oxford Co., Ont.

The illustration on page 22 shows baskets planted with three plants each of Lophospermum, Jasminoides. They were secured in September, when the plants were as green and vigorous and still flowering as they were in June.

Eight of the baskets were kept during the past season on our verandah, as much alike as a night peep, and three planted with Mandarinas Barcolayna. These latter, which are not shown in the illustration, have a tendency to grow up rather than down, but make a very pretty basket when planted alone, a perfect ball of green, with here and there a spray of flowers from the top

of the wires to the bottom of the basket. Fourteen-inch baskets are used, and good, rich soil, with a handful or two of bonemeal in each, and plenty of water all the time.

Steering is the best and most economical way of cooking meat. It needs very little heat, and the vegetables, so necessary for the flavor, increase the bulk.

Buy a Piano You'll Be Proud Of

The Sherlock-Manning 20th Century Piano embodies all the best in piano building—both in labour and material. The Sherlock-Manning Piano is guaranteed to satisfy.

The illustration shows our beautiful Louis XV Piano. Noted for its permanency of tone, beauty and workmanship. When buying a piano, the first consideration should be

Tonal Quality

Listen to the SHERLOCK-MANNING Piano. You'll be delighted with its beautiful, singing tone—a tone that will be evident after a few days of service.

This is the piano with the famous Otto Hegel DOUBLE REPEATING ACTION—quickest response to lightest touch. Insures no slurring even in staccato passages at fastest tempo.

If you are thinking of buying a piano, call at the factory, or let us give you the name of our representative in your territory. We can save you \$100 on your purchase. And you'll be satisfied with this superb piano as long as you live.

If you do not know the SHERLOCK-MANNING dealer near you, write us, and we will gladly introduce you to him, or we will give you full information by mail direct. You will save money by writing NOW for our catalogue.



LOUIS XV.—Style 80

But we can't begin to tell you all the beauties of these pianos. Write for new catalogue, showing all the different designs.

Sherlock - Manning Piano and Organ Co.
London, Canada
(NO STREET ADDRESS NECESSARY)



A Tasty Rockery

If not placed in too prominent a position rockeries nicely planted may be used effectively in beautifying the grounds around the farm house. They have the advantage of being easily planted and easily cared for.

Our hearts are like the springs of a river. If they be polluted the whole stream will be defiled. If our hearts are sinful our thoughts and words and acts will be likewise. Just as it is necessary that the springs of the river shall be purified before the stream can be cleansed, so it is necessary that the character of our hearts shall be changed before we will be able to conquer our sins.

Christ had a wonderful way of going to the roots of things. He read the hearts of the people who came unto Him. The masks were, torn from the hypocrites, and the righteousness of the just was revealed. Often hidden sins were laid bare to those who were unconscious of their existence. This was the case with the rich young ruler. Christ looked into his heart and saw that while he was righteous in other respects, yet he loved his wealth more than he loved God. Therefore, in order that He might see his sin, He told him to go and sell all that he had and give unto the poor, and, like a flash, the hidden sin was revealed and he went away sorrowful because he had great possessions. Christ tested him and he was found wanting.

And just as Christ tested this young ruler so He tests us. He tells us that we are to pray for those who ill-use us. Well He knows that if we endeavor to fulfill His command we cannot do so without searching our own hearts and thereby discovering—it may be—sins of which we have not been conscious. He has told us that if we desire to be forgiven for our sins we must first for-

Wherever you are, whatever your need, you can buy from DRUMMOND what you get will be entirely satisfactory. Dairy farmers, milk dealers, creamerymen, cheese makers, buy their apparatus and equipment of all kinds, from a milk pail to a refrigerating or pasteurizing plant from DRUMMOND. Any of the following articles promptly shipped on receipt of price.



Decimal Automatic Scale

Is made especially for weighing milk in the pail. There is a loose indicator on the dial that can be set back by a thumb-screw when the pail is on the hook. Then when the pail of milk is placed on the hook this indicator gives the exact net weight of the milk. It has another indicator that records the same as any spring balance, so it can be used for weighing anything up to 30 pounds—larger sizes weighing 60 and 120 pounds.

\$4.50

The Facile Jr. Babcock Tester

Used by all the Gov't Testing Stations. The Facile Tester is the same as carried by all the Canadian Gov't Testers, who travel all over the country on their official trips. It is a simple construction and operation. The working parts consist of but two cut gears which are enclosed in a cast iron case to keep them free from dirt to prevent their catching clothing, towels, etc. It turns easily without vibration or jar. It is sent complete with glass-wash, bottle brush, acid and full directions for use. It will pay you to use this case and tester who buy 1 or 30 cows.

4-bottle Tester . . . \$5.50
2-bottle Tester . . . \$4.25

Drummond's Guarantee Prevents Disappointment

We guarantee all our goods to be and do as we say. If you have trouble in getting results or if there is any defect in what you buy, let us know and we will adjust it satisfactorily.

The Dairy Car on the Ontario Government Demonstration Train was Equipped Entirely with "Drummond Supplies."

Sterilac Milk Pail

Is note its clever construction. The funnel is detachable. As the milk falls on the slant towards the milkier, it passes direct through the strainer into the pail. All dirt falls on a deep shelf inside the funnel—not on the strainer—thus milk and never come in contact. You can use ordinary cheese cloth for straining milk and never clean joints on the inside. Capacity 14 quarts, no price \$2.50. Usable: it is easily cleaned, and durable.

MILK STRAINER SHELF



Other Things Every Dairyman Needs

- Straight Spring Scales, 25 lbs. by 1/2 lbs. . . . 38c.
- " " " 50 lbs. by 1 lb. . . . 59c.
- " " " 40 lbs. by 1 lb. . . . 75c.
- Roto Salt Cakes and Feeders . . . 50c.
- Cattle Instruments, Trocars, Milk Fever Outfits, Garret Cure, Hard Milker Outfit, Horse and Cattle Springes, Etc.
- Bestov Coolers and Aerators

Write Now for FREE Catalogue

full of suggestions for making dairy work easier and more profitable. Sent FREE on request. Address

W. A. DRUMMOND & CO.
215 King Street E. Toronto

The Care of Lawns

J. T. Rose, Brant Co., Ont.
 In the first place, I will take it for granted that your ground is in good condition in regard to drainage. If you have any low spots be sure and build them up by cutting the sod into strips and then rolling them back to the proper level. Your next move is to get some good, rich soil and fill up the opening made until it will be a little higher than the surrounding ground, as it will settle.

For fertilizer, take very rotten horse or cow manure and apply to

the depth of an inch or more. Every few days take a rake and stir or spread the manure about so that it will not bleach the grass. When you find the grass getting long and white remove the most of the manure, but do not be afraid of leaving some on, as the grass will soon eat it up.

LOAM FOR FERTILIZER

Some seasons I only apply rich loam, to which I have added some bone meal and wood ashes. This I scatter over the lawn so that I can just see the grass. Every few days I take an iron rake and work it through

the grass. I keep my lawn cut very close all season, as I find it grows more compact and has a deep green color. I apply plenty of water and use the lawn mower constantly until the frost comes, so that there will be no brown grass in the spring to spoil the appearance of the lawn.

If you are just starting to fix up your lawn around your new home, by all means secure some good rich top soil, and after spreading it apply some well rotted manure and have it ploughed or dug in—for, like everything else, a lawn must have a good foundation to start on. Then level

off and sow your lawn seed. When it has grown to the length of say two or three inches, I would start and cut it with the lawn mower to make it stool out.



A mop made by binding a cloth to a paddle or a simple pine stick makes a very effective dishwasher. Boiling water may then be used which will cleanse the dishes quickly and thoroughly. If scalded a second time in the draining pan they will require little or no wiping. This device is useful for one troubled with chapped hands.

Extra

Ed. Lane
 The advantage of a manifold in quantity of work will be on our side if we wait for our field crop vegetables and that would be in the field and by the family diet at a time long for a need not be long to plant every day cultivation. The best as

Here are two typical values from the new Spring and Summer Catalogue of **The SIMPSON Store** Over two hundred beautifully illustrated pages of **DELIVERY-PAID MERCHANDISE**

There is a copy for you—send for it to-day. Meantime let us send you one of the wonderful values illustrated here.



G43. This Coat is made of All-wool English Serge, in a neat design, distinctly up-to-date. The colors are black and navy, the dye being there to stay. The back of the coat is semi-fitting and the seams are raised. The front is single-breasted and fastens with three buttons. The collar is plain tailored and the revers are overlaid with black satin, and the cuffs are finished with a stitched tab of self material, ornamented with buttons. There are patch pockets with flaps and buttons. All seams are well bound inside; the coat is lined across the shoulders, and finished with French facings.
 Sizes 32 to 42 bust.
 Length 54 inches.
 Price, delivered . . . **\$10.00**

G92. This is a Neatly Tailored Suit, noticeable anywhere for its simple grace and dignity. The coat is semi-fitting back and front and lined with grey satin. The collar has large pointed revers and finished with piping of narrow striped fabric. The sleeves are tailored, with cuffs that match the collar. The pockets are stitched in obliquely. The skirt has the new wide front panel, and the fold below the knee line is ornamented at the front seams with little buttons. It has a full length back panel, which fastens to the left. Sizes, bust 32 to 42; waist 22 to 29. Length 38 to 42. Price, delivered **\$11.75**



N.B. Whether you order fifty cents' or fifty dollars' worth, we pay all delivery charges to your nearest station or post office on everything mentioned in this Catalogue.

THE ROBERT SIMPSON COMPANY LIMITED
TORONTO



An Attr
 The beautiful very attractive garden at Dunlop, Cumberland, one of the manorland to make
 ing east or south morning sun, a growth. As soon the ground a row sown; also pars and beets, each two or three de and a row of g spinach as it is
ABOUT P
 Most people onions, but oh of getting them plan, however, filled in a few silverskin or wh and sow thickly, about 30 feet of ly full grown pu over them, tops ripen off. If d all you have to d up, wash them, root and they ar get, as the soil h for layer from ha
 For early pota lox, not more t and put in it see We place the fl room and let 4 about an inch or If they are like fore we are rea them in full light

Extra Early Vegetables
Ed. Lane, Waterloo Co., Ont.

The advantages of a garden are manifold. In it we can grow a small quantity of different vegetables that will be on our tables much earlier than did we wait planting until we put in our field crops, and a number of vegetables and fruits can be grown that would not be planted at all in the field and will be much appreciated by the family; it gives diversity of diet at a time when the appetite is longing for a change. The garden need not be large. We think it well to plant everything in rows to simplify cultivation.

The best aspect for a garden is fac-

stop growing. We are careful in planting not to break off the shoots. We have new potatoes 10 days earlier than by the old way.

No vegetables will grow successfully without moisture in the soil, and the best way to preserve that is by constant stirring of the soil, especially after rain; the best tool to do it with is the cultivator.

Growing Sweet Peas

Mrs. H. C. Nicholson, Lincoln Co., Ont.

The sweet peas with which I had such good success last year were grown as follows: First, I manured the ground well, and then harrowed it thoroughly. I then took some well rotted manure and forked it in where the rows were to be planted. I worked it over and over to the depth of over one foot, so that I had the soil perfectly pulverized. I then made shallow trenches, about four inches deep, planted the seed about three inches apart, zig-zag, which made two rows, and as they grew I drew the soil up to them till the soil was level. I then drove two by two inch stakes at each end and the middle, and corded from stake to stake.

At intervals of two weeks I gave three sowings of nitrate of soda broadcast between the rows.

Instead of spraying water over the top of the peas, I thought that I would try another method of watering. I had five rows, 30 feet long, four feet apart between the rows. I then made a ditch between each row, and turned the hose into each ditch, and filled full of water. I found that way kept the soil cool, and the water seeped through to the roots easily. The peas grew well. Why, I had peas galore, the finest that I ever had. A few days before our July exhibition, I covered them with cotton, for the sun scalds the bloom badly here, which spoils them for show purposes.

I may say that I always grow the Spencer type of sweet peas, as I think they have the most delicate colors and the largest blooms. They generally have three and four blossoms on strong stiff stems.

The Sap of the Maple

R. F. Whiteside, Victoria Co., Ont.

The sap from the maple tree flows in the spring quite free. It makes the children wild with glee when syrup in the pan they see.

Syrup, of then we sing—
Fit for a priest or king!
Welcome to thee.

The maple leaf so dear
Comes free and full of cheer
When it we see.
You say you would fight
For the Maple Leaf.
Buy my syrup and
Show your belief.

The syrup comes from the maple tree,
The maple leaf on it you see;

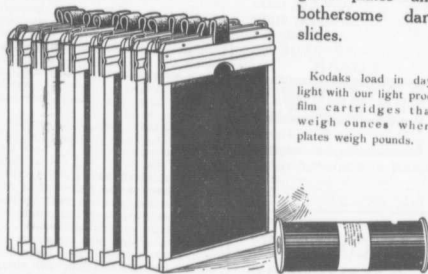
The trunk yields sap
Quite thin and free.
You certainly love us,
You jolly tree.

Snap fasteners are better than buttons for fastening the backs of little girls' dresses, as they cannot catch the hair to break and wear it off.

Don't judge photography by your plate camera experiences.

KODAKS

do away with cumbersome plate holders, heavy fragile glass plates and bothersome dark slides.



Kodaks load in daylight with our light proof film cartridges that weigh ounces where plates weigh pounds.

1 doz. 4 x 5 glass plates and holders for same Kodak Cartridge containing 1 doz. 4 x 5 film Weight, 2 lbs. 8 ozs. Weight, 24 ozs.

THIS PICTURE TELLS THE STORY

By the Kodak System there's no dark-room in picture making. Loading, unloading, developing, printing all by daylight—and better pictures than can make by the old methods.

CANADIAN KODAK CO., Limited

Catalogue free at the dealers or by mail

TORONTO, ONT.



An Attractive Garden Entrance

The beautiful archway here illustrated renders very attractive the entrance to the vegetable garden at Dunais Farm, the home of Mr. Harlow Cumberland, Durham Co., Ont. This is just one of the many devices adopted by Mr. Cumberland to make his home attractive.

ing east or south; it will then get the morning sun, a desideratum in early growth. As soon as the frost is out of the ground a row of early peas can be sown; also parsnips, carrots, onions and beets, each of which will stand two or three degrees of spring frost, and a row of garden orach or dutch spinach as it is sometimes called.

ABOUT PICKLED ONIONS

Most people are fond of pickled onions, but oh! the disagreeable job of getting them ready. Following my plan, however, a quart bottle can be filled in a few minutes. Get some silverskin or white Barletta onion seed and sow thickly, a five cent packet to about 30 feet of a row, and when nearly full grown pull the soil completely over them, tops and all, and let them ripen off. If done at the right time all you have to do is to take the onions up, wash them, cut off the top and root and they are ready for your vinegar, as the soil has kept the outer skin for layer from hardening.

For early potatoes we get a shallow box, not more than two inches deep, and put in it seed of an early variety. We place the flat in a warm, dark room and let the potatoes sprout about an inch or so by planting time. If they are likely to be too long before we are ready to plant we put them in full light and they will then

Well DRILLING MACHINES

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engine or horse power. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog. WILLIAMS BROS., ITHACA, N.Y.

WOMEN CAN EARN MONEY or secure useful articles of household furniture, clocks, dishes, kitchen utensils, books, etc., by sending their friends and neighbors and getting them to subscribe to this paper. Cash commissions allowed on new subscribers. Get us 25 new subscribers at only \$1.00 a year and we will pay you \$10.00 cash. **FARM & DAIRY, Peterboro, Ont.**

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St. Lawrence Sugar

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The St. Lawrence Sugar Refining Co. Limited
MONTREAL 32

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CLEAN and SIMPLE to Use.

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"The Mail Order House de Luxe of Canada"



Making the Face

"Why, what a funny heading!" you can imagine some of our little readers saying. "We don't make our faces; we've got them!"

Well, I'm not so sure about that. Of course, we can't alter the shape of our chins or our nose, but, after all, the chin and the nose are only part of the face. What makes beautiful many a face in which you can find hardly one good feature? Isn't it the expression? Of course it is. And I think the face always bears the impress we put upon it—put not consciously, perhaps, but by our habits, our thoughts, our actions, our tempers, and so on.

Who doesn't want to be beautiful? Everybody does. I suppose. Well, why doesn't everybody try? I have seen some little boys and girls going about habitually with frowning faces, and I know quite well that if this continues the expression will gradually become fixed, and the people will say they have a "disagreeable" appearance. People who are angry, selfish, mean, deceitful, give their faces an expression which may not always show the character to others, because we are not all adepts at reading this kind of writing, but which certainly is not pleasant, and if boys and girls want their faces to be "nice," they must think nice thoughts, do nice actions, be kind and pleasant.

I know people the sight of whose faces is always stimulating, not because they are smiling, but because of the cheerful, kind expression which cheerful, kind ways have fixed on them. I have heard people say, "What a pleasant face So-and-so has,"

and the person referred to is quite plain, if you examine her features one by one; yet she is one on whose face you can look with pleasure.

Oh, yes, we have a good deal to do in the making of our faces, boys and girls; and, believe me, that the face is a locus in which to draw our own characters, so to speak. And I want you to think of this, when you are inclined to be angry, or selfish, or morose, or unkind. Let the picture you place before it be a good, kind-hearted, clean boy or girl, and you will find the expression on the face one which will be pleasing.

Have you ever seen a little child crying? Place a mirror before its face, and it will be so astonished at the picture that it will often stop quite suddenly. It didn't know it looked so ugly. If only we had mirrors before our faces when we feel angry, or spiteful, or "nasty," we should realize on what pattern we are making our faces, and be more ready to try to effect an improvement.

—A.R.—West Farmer.

A Wild Flower Garden

R. S. Hood, Waterloo Co., Ont.

I enclose you a snapshot of my wild flower garden. It is situated on the north side of the kitchen. The house projects eight feet past the kitchen, which makes a very useful place for it as it gives a north-eastern exposure. The bed is eight feet wide by 16 feet long. It is filled with plants brought from the woods and swamp, and planted by myself. It has taken some years to get the collection together. It is and has been a source of pleasure to others and to myself, and not by any means the least of the pleasure is the fact that it makes a nice corner at our home.

All the plants are strong and healthy, and bear large foliage. They have taken very kindly to their new home. Occasionally during the summer I give them a treat in the shape of a little stimulant, to which they respond very generously.

There are over 200 trilliums. Their blooms were exceptionally large last spring. Included also are five varieties of ferns (one fine specimen of the maiden-hair variety), three varieties of lady slippers, 35 of the large yellow lilies, 12 of the small yellow variety, and 21 of the tall or showy slipper. The top of the rack or slip of several was a beautiful shade of pink, others white. One of the showy variety had three flowers on one stem, six had two, and the rest one each.

There are 38 lilies, ranging in height from two feet to six feet. One has 12 clear little graceful blooms on it. Others have from one to 10.

I have also several plants of Jack-in-the-pulpit, blood root, violeta, hepatica, false Solomon seal and May apple. Every one to his or her own taste, but the little wild flower garden is my favorite.

The Farm for Boys

Jas. B. Ross, Peel Co., Ont.

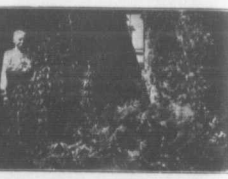
The last Dominion census brings us face to face with the sad fact that the population of our rural districts is going behind. This is a serious thing and naturally the question comes to us, "What is the reason?" Is there any remedy?

I believe that a great many boys on the farm see the beautiful things of the city and the city part of farm life. Ask a country youth what he intends to be and very often he will tell you, a doctor, or a lawyer, not that they feel they have special gifts for these professions, but they hear of the fame of some great lawyer or

the money made by some great doctor and they imagine that they can do the same. They never think that perhaps they may never rise any higher in these lines than thousands in the same profession who can hardly make ends meet; we find them in nearly every town and city in Ontario to-day.

Perhaps these boys have been brought up on a farm where management was not of the best or perhaps the income of the farm was not equal to their ambitions. They judged the future by the present. If the boys on a farm like this would only see what many a young farmer has accomplished, or if they could only visit some successful farmer and compare the methods on their own farm with those of this successful farmer and make an effort to live up to their possibilities, we believe there would not be such an exodus from the farm to the city.

I will point out what can be done on an acre of land where the products are fed to the dairy cow. The average yield in Canada to-day produces 4,000 lbs. of milk which, if sold at six cents a quart, would realize \$96. On the average it takes about four acres of feed for a cow, which means about \$24 an acre on the average dairy farm. Let us take the highest feed of a cow at the Ontario Agricultural



Mr. Hood's Garden

College, and also the best returns on an acre of land from the same institution. One cow there gave 21,000 lbs. which, if sold at the same rate as the first mentioned cow, would bring in \$504. By producing large crops of corn and lucerne and practicing up-to-date methods we can feed one cow on one acre.

A TOO WIDE VARIATION

Compare the two. The average acre whose raw material is transformed by the average cow into milk makes \$24. This other case brings \$504 per acre, or a difference of \$480 an acre between land that was managed poorly and land managed in a scientific way.

Perhaps you may say this is exceptional. Let me tell you, young farmers' sons, it is no more exceptional than the high-salaried professional men that are giving you such an impulse to go to the city. We can apply this to any of the lines of farm life, beef, fruit, cattle, and so forth. I believe if many of the energetic farmers' sons, who think that the farm would never give them scope to use their energies to their best advantage, would study the great possibilities of farm life in the different lines, they would think twice before they leave for the city.

Grass for a Shady Lawn.

A mixture of seed which is very satisfactory for a shady lawn can be made by using Kentucky bluegrass two parts, Woodland meadow grass two parts, various leafed fescue one part and crested dog tail grass one part. This mixture makes about the best all around grass that can be obtained, and one which will remain green throughout a much longer portion of the year than either the Woodland meadow or Kentucky bluegrass.

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Have You Made Your Will?
If Not, Your Family is Un-protected
No Lawyer is Necessary

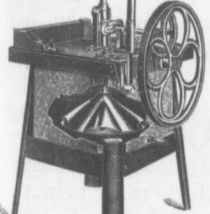
For thirty-five cents you can make your will and be absolutely assured that it is perfectly legal in every respect and that it cannot be broken by anyone, no matter how hard he may try.

Delay in making your will is an injustice to those whom you wish to be taken care of. The courts are full of will cases where, by legal technicalities or the absence of a will, the people who inherit property are almost the last ones that the deceased would want to share in it. Life is very uncertain.

So if you wish to assure those who are nearest and dearest to you of receiving all that you wish them to have, instead of paying \$5.00 to \$10.00 to a lawyer send 3 cents for a Blank Will Form, which also includes a specimen will for your guidance. Fill it out according to simple instructions and you may be perfectly sure that it will stand every legal test and cannot be broken under any circumstances.

Why not send to-day, now, while it is in your mind to The Max Will Form Co., Room 5, 275 College St., Toronto.

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the most delicate fabrics, break buttons or fasteners or damage the goods in any respect. Quickest, Easiest and Cleanest Washer in the Market, and Made in Canada. Send post card for circular. Agents wanted. Manufactured by

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HELLO BILL!

Say, isn't it fine to have an Independent Telephone in the House?

"Well, I should say so. Why, only yesterday, I saved me a long, cold drive to town. I just phoned the store, and they sent my stuff along by man Thompson. It was, did you know, easy, easy up again." "By the phone, too, and said pork was going higher, too. Guess we ought to step over."

"And Mary wants to talk to your wife." "All right—well, I will let the women folk use these telephones, and Bill, it's worth the money, just to help them from the house, when they're at a church social."

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 in a time never said money order. It keeps you in touch with the market—brings you the latest news—advises you of price changes—advises you of weather—advises you of stock market—advises you of news—advises you of sports—advises you of all the news of the day. You can have your own telephone system—send separate card and control lines and

Our Free Booklet "How the Telephone Helps the Farmer" Bulletin No. 19 tells all about this. Write for a copy, read it—then call your friends together and talk over the proposition. End write to-day.

STROMBERG-CARLSON
 72 Toronto Street, TORONTO

About Farm Water Supply
 K. L. Jones, York Co., Ont.

Some of the wells on our farms are certainly death traps of the first order. I see by the reports of those who officially test well water that an alarmingly large percentage of farm wells are contaminated with disease producing bacteria. We have always regarded our own well as the best in the country, and we believe that other farmers are inclined to view theirs likewise. Even our water, however, did not pass a chemical and bacterial examination.

Although we may have been drinking the water in our wells for generations without bad results, it is not proof that they are harmless as our own family may have become immune to the particular disease contained therein. Visitors, however, may not be immune. The only safe plan is to have our water tested either at Ottawa or Guelph. Our own experience in this line leads us to advise this course to Farm and Dairy readers.

Character

To what extent can a person's character be read in their face? Most of us believe that we can sum up a person's character fairly well just by looking at them. And I believe that in nine cases out of 10 we will hit it pretty nearly right. Strength, weakness, decision, or lack of it, all show clearly in a person's face.

I have been thinking over this subject of character as expressed in people's faces and have just about come to the conclusion that we ourselves have the power to make our faces express strength or weakness. The expression on a person's face, I believe, is but an expression of their innermost thoughts. If we try to cultivate decisiveness and self control and all other things that make for a strong character, those characteristics will soon be expressed on our countenances.

It is said that looks do not count. This may be quite true in so far as "beauty" is concerned, but looks do count for everything when it comes to "character" expression. — "Cousin Jim."

THE COOK'S CORNER

Recipes for publication are requested. Inquires regarding cooking, recipes, etc., gladly answered. Editor and Dairy, Peterboro, Ont.

BAKING POWDER COOKIES

1 cup white sugar; 1 cup rich sweet cream; 2½ teaspoonfuls baking powder, ¼ teaspoonful soda; flour enough to roll. Bake in quick oven.—R. L.

NEW YORK CRANBERRY SAUCE

Put in bottle with one pint of water and four sliced tart apples. Cover and cook 20 minutes. Press through a colander, add one pound of sugar (or two cups) and boil five minutes longer.

SHORT-CAKE (RASPBERRY OR HUCKLEBERRY)

Ingredients—One qt. of flour, 2 tablespoonfuls each of butter and lard, 2 half cupfuls of buttermilk, yolk of 2 eggs, a teaspoonful of soda and salt, 1 qt. of raspberries or huckleberries. Sort the flour; chop up the lard and yolk of the flour, whisk well the buttermilk in the eggs; dissolve the soda in a little warm water. Make all these ingredients into a soft paste. Roll lightly into two sheets; lay the bottom crust in a greased square pan, press thickly with berries, sprinkle with sugar and cover with the upper crust. Bake about half an hour; cut into squares and send to table piled upon a dish. Split and eat with butter and sugar.

Embroidery Designs

Designs illustrated in this column will be furnished for 2 cents each. Readers desiring any special pattern will confer favor by writing Household Editor, asking for same. They will be published as soon as possible after request is received.



627 Design for Embroidering a Hatpin Case.

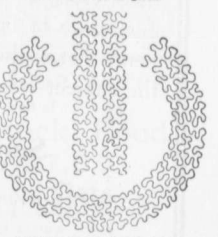


613 Design for Banding two inches wide. Especially adapted to May Manton's Pattern 7213 To be embroidered with Beads or French knots.

A curved band for a low neck gown and straight banding for sleeves are given.



684 Design for Embroidering a Doylen ten and one-half inch in Diameter. One transfer pattern is given.



629 Design for Braiding a Round Bertha and Sleeves for a Girl's Dress.

Especially adapted to May Manton's Pattern 7278.

In patching, if embroidery hooks are used to hold the cloth with which you are patching in place, basting is unnecessary and the work is done much quicker and neater.

30 Registered Holsteins

Three Standard Bred Horses
 WILL BE SOLD, BY PUBLIC AUCTION, AT
ATHENS ONT., FRIDAY, MARCH 15

Having interests in the west, which require my attention for a few months, and feeling that my stock and horses are too valuable to leave at the Gamble House, Athens, Ont. I decided to sell them by public auction commencing at 1 p.m. sharp.

My cattle include 30 pure bred Holsteins, consisting of calves, yearlings and young cows. All my cows are select, some having official records of from 15 to 21 the butter in several years. They are of such breeding as follows: One son and several granddaughters of Carmen Sylvia. Daughters of the late Sir Maida, granddaughters of King Segis, Car Bown, Francy of Francy Ind, etc.

These cows are due to freshen in March, April, May and later. Certificates of registry will be produced at sale. I shall also offer my incubator, brooder and home enter, all being in good repair.

TERMS OF SALE: Six months credit on Approved Notes with interest at 6 per cent. per annum. I expect to make provision for my practice during my absence and resume it on my return.

GEO. HOWARD, Auctioneer. D. G. PEAT, V. S., Proprietor. Athens, (Leeds) Co. Ont.

Farming

has become a specialized business



It's no longer a "hit-or-miss" occupation, where "any old way" is good enough. Farmers are buying pianos and automobiles as never before. They're *living* as well as *working*.

The farmer has learned that it *pays* to employ progressive methods. That's why he is ever ready to receive helpful suggestions for improving his crops, his land and his home. It's also the reason that more than fifty thousand Canadian farmers are enthusiastic about our handsome book,

"What the Farmer Can Do With Concrete"

It isn't a catalogue, nor an argument for you to buy something. It is clearly-written, interesting, profusely illustrated. It describes the various uses to which concrete can be put on the farm. Not theories, but facts, based on the *actual experience* of farmers all over the continent. It is the most complete book on the subject ever published, fulfilling the

purpose behind it, which is to help the farmer take advantage of concrete's possibilities. The list of subjects covers every conceivable use for concrete on the farm. The book's actual value to you will far exceed the list price of fifty cents, but if you will send us your name and address at once we'll be glad to

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Send a post card for it--do it to-day. The book will be sent by return mail.

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STICKNEY Gasoline Engine

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Our constantly growing trade demands large supplies of choice farm products. We need you. Write for weekly market letter.
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THE FENCE MAN
H.C. LEIGHT
Sells direct to buyers at factory prices. Iron and Wire Fences, all styles: Gates, Barbed, soiled and plain wire; Staples; Fence Hooks; Tools. Special prices car-loads.
I save you big money, give you best fencing and quick service. Here are sample prices: All No. 9 Fence 5 strands 20¢; 8 strands, 36¢; 7 strands, 56¢ per rod, etc. 17 years in Canadian fence business. My printed matter explains my methods. Get 8¢. Write to-day.
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Ask for Folder "L." TORONTO



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PURE BRED BULLS

at any show in the United Kingdom

Auction Sales of Cattle

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The Agricultural Superintendent
Leinster House - DUBLIN

FARM MANAGEMENT

Does not Favor Commercial Fertilizers

J. O. Duke, Essex Co., Ont.

I have tried commercial fertilizers of different kinds on different crops, and am convinced that they are not profitable when farming in a general way. It was only in rare cases in my experience that an application of any commercial fertilizer would be profitable on corn, oats, wheat and so forth. I believe that Ontario farmers should study to effect a "balanced ration" with the soil as well as with the animals they are feeding. Short rotations with red clover, or a permanent seeding to alfalfa with proper drainage will more profitably fertilize the soil than will commercial fertilizer.

There is no doubt but that commercial fertilizers can be profitably employed in the production of crops that require a large amount of labor and are highly profitable, such as melons, strawberries, early tomatoes, or tobacco, but so far I have found nothing that will give as good results as good barn yard manure for the general farmer.

Ontario Good Roads Association Meets

The delegates to the Tenth Annual Convention of the Ontario Good Roads Association held in Toronto last week were particularly elated over the results of the influence that they have been able to exert on both provincial and Dominion governments. In his opening address, President Kennedy stated that the year 1911 was the most eventful in the history of the good roads movement in that both the federal and provincial governments had recognized the necessity of helping the farmer build and maintain a good highway system. Mr. T. L. Kennedy, Peel Co., stated that in Ontario one-half of the total assessment, or \$500,000,000, is on the cities alone, and these cities maintain only a few miles of road. The other half of the assessment on towns, villages and townships is taxed to maintain 60,000 miles of roadway. As public highways are maintained for all the people and not for any particular class, Mr. Kennedy maintained that it is only fair that cities as well as governments, should help in the good roads movement.

Toronto is already assisting in the improvement of country roads leading into the city. Mayor Broder, who attended some of the sessions, stated that the \$300,000 that Toronto was spending on country roads, is a good move for both the farmers and the city people. Mr. Andrew Broder, M. P., advocated the taxing of autos to help build and maintain good roads.

Mr. H. J. Bowman, of Berlin, Ont., figuring on a basis of 81 per cent. of population, said that Ontario's share of the federal aid to give good roads should be \$2,000,000. Half of this sum might be used to build and maintain public highways, and the one great road that could connect Montreal and Windsor. The other half should be given the country road system in Ontario.

Mr. W. A. MacLean, Provincial Engineer of Highways, in an address on Country Road Construction, said that 20 counties in Ontario were now building a system of roads, and the total expenditure to the end of 1910 had been \$2,681,435. Hon. J. O. Reaume, Minister of Public Works, also spoke at the convention.

COCKSHUTT



COCKSHUTT makes this Disc Drill---the machine that never clogs, never sags in the centre, and never loses accuracy of the feed device. You ought to use it. Discs are 6 inches apart and produce maximum crops. Close seeding chokes weed growth, also prevents drought troubles. You get 2 to 5 bushels extra per acre. Cockshutt Disc Drills actually make extra crop for every user, and so quickly pay for themselves.

A big I-beam holds up frame and keeps centre Discs from sagging. This prevents deep sowing and makes even ripening of grain---all your land grows all your seed just right.

Remember---no stops for oiling Discs, no stops for cleaning Discs. Discs are self-cleaning and non-clogging and self-oiling. Every part of a Cockshutt Drill is strong and long-wearing. Send to-day for our Cockshutt Drill Book Free.



Note how the Cockshutt Grain Bore draws away from the Disc. Trashed lifted by the Disc falls easier the higher it is lifted. Besides, the automatic cleaners, the dust-proof oil-well disc bearing and the high carbon steel Discs with their keen-cutting edges give you light draft. The Cockshutt Drill not only means quick sowing but it is the easiest possible Drill on the horse.

Write to-day for the Cockshutt Drill Book. Remember we can supply you with anything you require in the line of Farm implements and machines.

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We Positively Guarantee

That a 25-Pound Pail of

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Will Save You \$7.00

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Because it promotes digestion and assimilation, and enables you to cut down the grain ration 15% to 25% and still get better results. This saving of grain represents a saving of good hard cash to you.

WE WANT YOU TO FEED 100 LBS. AT OUR RISK

It will not cost you a cent if you are not satisfied.

See our dealer in your town or write us for particulars. Mention this paper and the stock you own and we will send you a litho, size 1 1/2 x 2 1/2, of our three champion stallions.

International Stock Food Co. Limited, Toronto

OUR FARMERS' CLUB
Correspondence Invited
COMPTON CO., QUE.
COMPTON, Feb. 23.—We have been hav-

ing fine weather, but at present it is a little stormy. Eggs and potatoes are very high. Feed is also high. Farmers are complaining of the high price grain seed will be this spring. We should harvest more grass seed than we do at present; it is a money-making crop.—H. G. C.

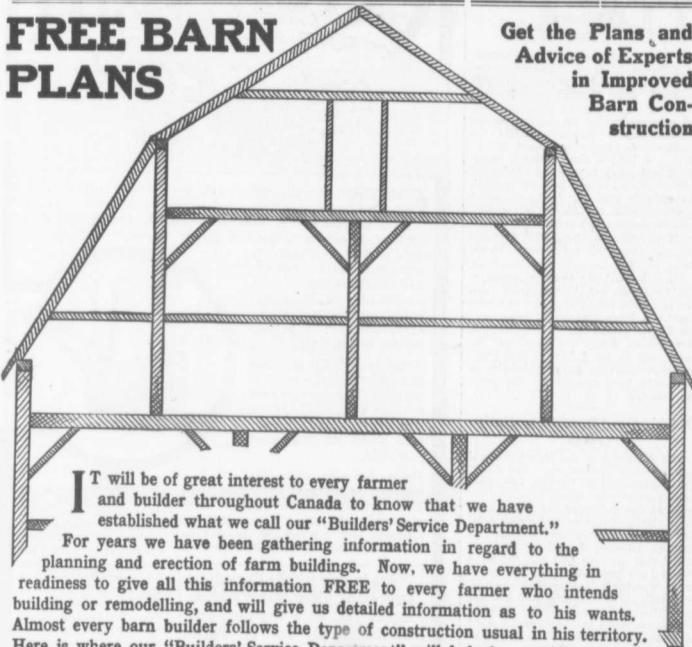
CARLETON CO., ONT.
BRITANNIA HAY, Feb. 15.—"The roads are not so good as other years owing to there being no soft snow to pack and make the sleigh slip along easy. Hay is not so bright as it formerly was, only \$12 for best. Oats are 50¢; eggs, 60¢; butter, creamery, 37c to 40c; beef, 6c for

fronts, 8c for hind; pork, light, 8c; heavy, 7.50 (mostly all small being of force). Beans, 45¢; glutin meal, 34¢; wheat, \$1; barley, 50¢.—J. A. D.
WELLINGTON CO., ONT.

QUELPH, Feb. 25.—Our roads are in bad shape, as the snow in many places is higher than the fences. It is feared that many fruit buds in this section have been killed by the severe frost. The thermometer has gone lower this month than we had seven years ago, when so many fruit trees were damaged. Market prices here are generally high: Beef, 10c to 12c; pork, 10c to 12c; potatoes, \$1.50 a bag; hay, \$18; butter, 50¢; eggs, 50¢; chickens, 25c a lb. The most of the pork on the market is light in weight, as there is very little money in finishing hogs at the present high price of grain.—S. N.

ELORA, Feb. 24.—Prospects for more moderate weather are with us, and this will be very acceptable as the long cold spell has been very hard on food supplies. All kinds of feed are on the upgrade. Turnips are selling here at over 25c. Hay is scarce and dear. There, of high prices for all grain, have still the effect of hurrying stock to market. Season and will make the shortage felt in on. It is certain that all classes of stock are fewer in numbers than for a

FREE BARN PLANS



Get the Plans and Advice of Experts in Improved Barn Construction

It will be of great interest to every farmer and builder throughout Canada to know that we have established what we call our "Builders' Service Department." For years we have been gathering information in regard to the planning and erection of farm buildings. Now, we have everything in readiness to give all this information FREE to every farmer who intends building or remodelling, and will give us detailed information as to his wants. Almost every barn builder follows the type of construction usual in his territory. Here is where our "Builders' Service Department" will help by providing suggestions and information obtained from all parts of Canada. "The Builders' Service Department" will co-operate with the barn builder to give you the ideal building.

Our Board of Advisers Builders' Service Dept.

We have a Board of Advisers, consisting of ten of the best barn builders and contractors in the country. These men have given years and years to the planning and erection of farm buildings. You can have all the information from these men FREE of all cost if you wish make known your wants. You wonder why we do all this FREE? It is for this reason: We feel that with this

we can help the farmer and builder to erect Ideal Farm Buildings. As the farmer builds he will want to build better and safer, so that his stock and grain and implements, etc., are absolutely safe from lightning, wind, rain and fire. Mail the coupon. Get the help of our "Builders' Service Dept." Remember this: Whether you buy from us or not we will give you the co-operation of our "Builders' Service Dept." free.



MANAGER

Metal Shingle & Siding Co., Limited, Preston, Ont.

CUT ALONG HERE Branch Office and Factory, Montreal, Que. MAIL IT TO-DAY

Send me Portfolio of Barn Plans, showing framework construction and plans of interior. I intend building a barn _____ ft. by _____ ft.

Are you interested in all steel buildings? (Yes or No) _____

Do you want roofing or siding for an old building? (Yes or No) _____

Name _____ P.O. Address _____

County _____ Province _____ Publication Farm and Dairy 104

CROWDED AND CROWDED OUT

An unexpected last moment rush filled our advertising columns to overflowing for this special number; hence the overcrowding on some of the pages. Several advertisements had to be held over. Amongst these were one full page for the T. Eaton Co., Ltd., half page for German Potash Syndicate; half page for Goodwins, Ltd.; quarter page for Amalite roofing, and 100 lines of double column for Renshaw Machinery Co., Ltd. These came too late to permit of enlarging the issue, several forms of which were already on the presses.

Our advertising patrons will kindly take warning and have copy in early for future issues to make certain of insertion and all getting good position. time past. Higher prices must surely result.—G. W.

WATERLOO CO., ONT.
AYR, Feb. 20.—We are having a mild spell again. During the past week on the 15th and 16th, a Short Course in seed and stock judging was held. We had two very interesting days. C. J. Bailey took up horses the first day; W. J. Squirel had seeds the next morning, and Prof. G. E. Day beef cattle in the afternoon. In the evening, under the auspices of the Women's Institute and Farmers' Club we had a union meeting at which the news was discussed. Mrs. MacDonald of the Globe for speaker.—G. C. S.

OXFORD CO., ONT.
WOODSTOCK, Feb. 25.—We are having very stormy weather. The Toronto City Dairy is holding in Woodstock, and was all the milk they can get, so there will be keen competition for milk and cream. Butter is selling at 35c to 40c; eggs, same price. Beef cattle are selling high, from \$1.20 to 1.60 live weight, and \$5.00 dressed, 61-20.—A. M. McD.

J. H. TAYLOR'S HOLSTEINS
(Continued from last week)
"Also I have another 8-year-old heifer, fairly Kornydko, in calf for the first time. The sire of this heifer, Manor Kornydko Wayne, has as his dam Susie Josephine, 20 lbs. 11 oz. butter in 7 days, and as his sire Belle Kornydko, Jersey Way who has 31 A.O. daughters and who's a brother to Pontine Kornydko, the most famous of all bulls. He has produced two daughters with 31 pound records." Also have an 8-year-old imported cow of perfect dairy type. She is sired by Prince Paul De Kol Amiens, who has three A.O. daughters.
"All my cattle are in A-1 condition and are due to freshen just in time for fresh pasture in April and May, and consequently will be very handily carried out the remainder of the feeding season. They are, however, of the type that it pays to feed, and they return profits."

"HOLSTEINS"

Ourville

Some of the yearlings got at the Deloit H.O.P. at the 10 months mark. E. O. F. at the 10 months mark. 12 months; Pauline, 15.24 lbs. but. age 2 years 12 months; Pauline, 15.24 lbs. but. age 2 years 12 months; Belle, 11 months, 11.20 lbs. but. Bull calves and the best of these 3 of the increase. Also more of same good older.

EDMUND I. AVIENS

AUCTIONEER
Sole agent for all real estate sales from the experience of A. E. H. ALDRON

One Yearly

His dam a young cow. Price \$100.00. Write for particulars. E. B. MALLORY



AUCTION

The Lakeside Farm sale at their barns: Monday, March 26th. For particulars apply to C. J. O'Rourke, Columbus, Ohio, which will be held at 10:00 a.m. Seed in your name arranged to attend E. F. OSLER.

HOLSTEIN

Sired by Prince Paul De Kol Amiens, who has 31 A.O. daughters and who's a brother to Pontine Kornydko, the most famous of all bulls. He has produced two daughters with 31 pound records. Also have an 8-year-old imported cow of perfect dairy type. She is sired by Prince Paul De Kol Amiens, who has three A.O. daughters.

FOR HOLSTEIN

Bull calf, born Feb. 20, dam average 10 days. Another bull cow in Canada of 10 lbs of butter in 7 days. 25 dam, daughter of calf with official record of 14.10 lbs. in 7 days. Two-year-old stock. David Campbell, York.

HOLSTEIN

For particulars write: GOR

GREATEST VIEW

Offers bulls from 7 to 10 years old. By Carl Joseph, owner of dam and grand dam. See advertisement in Holland. These cows are bred for milk. For description and prices apply to ARCHIBALD PARKS

AVONDALE FARM

Arthur C. H. offers bull calves out of tested dam, Johanna Colantha, 30 lbs. son of Colantha, 30 lbs. son of Kornydko, and 10-year-old dam. Also HORN DORSET SHIRE PIG. Address all correspondence to H. LORNE LOYD. Brookville

HOLSTEINS

Ourvilla Holstein Herd

Some of the young things that should make good milkers...

EDMUND LAIDLAW & SONS, Auctioneers. My lifetime has been devoted to breeding...

One Yearling Bull Holstein

His dam a good Officially Tested young cow. Write for particulars: E. B. MALLORY, Frankfort, Ont.

Purebred Registered HOLSTEIN CATTLE. The Greatest Dairy Breed...

AUCTION SALE

The Lakeside Stock Farm will offer for sale at their barns near Ontario, Ont. on Monday, March 25th, 1912...

HOLSTEIN BULLS

Bred by Prince Hengerveld Pieterie, whose dam has a record of 35.16 lbs. butter in 7 days...

FOR HOLSTEIN BULL CALVES

Bull calf, born Feb. 2, whose four nearest dams average 27 lbs. of butter in 7 days...

HOLSTEINS

If you are wanting HOLSTEINS, any age, either sex, write: GORDON B. MANHARD, Manhard, Ont.

GREATEST VIEW HOLSTEIN HERD

Offers bulls from 7 to 11 mos. old bred by Karl Joseph, son of Karl Bos, whose dam and grand dam have the largest...

AVONDALE FARM HOLSTEINS

Arthur C. Hardy, Prop. We offer bull calves, all ages, and all out of tested dams...

Also HORN DORSET SHEEP and YORK SHIRE PIGS. Address all correspondence to: H. LORNE LOGAN, Manager 8 Brookville, Ont.

MARKET REVIEW AND FORECAST

Toronto, Monday, March 4.—The road being full of snow all over Eastern Canada, has made trade rather dull of late...

Wheat, 82; shorts, 87; Ontario bran, 82; shorts, 87. Montreal prices are unchanged. Manitoba bran, 85; shorts, 85; Ontario bran, 84 to 85; shorts, 87...



A Holstein Heifer that is a Credit to the Breed

Neatherland Dairy Pouch, 11947, owned by W. H. Cherry, Garnet, Ont., was third at Guelph Dairy Test in 1911...

There is very little change in the produce markets this week. Deliveries in all lines have been slack, but demand was equally indifferent...

Prices of wheat at Chicago have gone up and down with reports satisfactory...

There is not much doing in the coarse grain trade. Bad country roads have retarded deliveries...

Prices of live stock are as follows: Barley, maitling, 50c to 50c; feed, 65c to 75c; rye, 81.00 to 81.00; oats, C.W. No. 2, 82.10...

Prices of live stock are as follows: Chickens, 15c to 14c; a lb. fowl, 7c to 12c; turkeys, 25c to 25c; ducks, 12c to 14c; geese, 15c to 15c...

Wholesale quotations for dressed poultry are as follows: Chickens, 15c to 14c; a lb. fowl, 7c to 12c; turkeys, 25c to 25c; ducks, 12c to 14c; geese, 15c to 15c...

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HOLSTEINS FAIRVIEW HERD

Too much money is spent every year for poor bull. Why not buy a good one? Sons of Pontiac Korzyk, Rag Apple Korzyk, and Sir Johanna Colantha Gladi for sale; 150 head in herd. Come and see them or write. E. H. DOLLAR, Hevelton, N.Y.

WRITE TO-DAY

For our proposition telling how any good dairyman may own a Registered Holstein Bull from a record of performance...

MONRO & LAWLESS Elmdale Farms, Thorold, Ont.

RIVERVIEW HERD

Sired bull calves from 3 to 10 mos. and offered by KING IREBELLE WALKER, whose mother is a dam and sister average 30.18 LBS. BUTTER IN 7 DAYS and 115.57 lbs. in 30 days from dams of likewise breeding...

"LES CHEVAUX FARMS" VAUDRUI, QUEBEC

HOLSTEINS—Winnipeg, the ring and at the stall. Gold Medal herd at Ottawa Fair. They combine Conformation and Production. Bull and Heifer Calves from our nursery for sale. DR. L. de L. HARWOOD, F. BODIN, Fran.

FERNDALE STOCK FARM Clydesdale Horses, Holstein Cattle

For sale—Four Bulls, 10 months old, got by Korodky King Sobalara, who is closely related to the famous Korodky, who sired two 37-lb. cows. Also, 20 Grade Cows, due to freshen in January, 15 Grade Cows, due to freshen in January, 15 Grade Cows, due to freshen in March and April. FIEBELER HORSES, Mt. ELGIN, ONT. Bell Phone.

25 Pure Bred Holsteins

Two years of age. Well bred and pink of condition, bred to a good bull. Nearly all due to freshen in March. A select bunch of heifers. Will sell a few or all of them. Price reasonable. Also, 15 Pure Bred Holsteins, grand bull of great quality. Son of a 25.76 lb. cow whose milk stood 4.3 per cent. fat. Write me if advised. R. CONNELL, ROEBUCK, ONT. Rural Telephone. Grenville Co.

WOODLAND HOLSTEINS

A son of Netherland Angler De Kol, B. of P. test 21,666 lbs. butter. Champion cow of Canada 1907, for sale. A son of Aaggie Schulling De Kol, B. of P. test 23,775 lbs. butter. He is full brother to Woodland Queen De Kol, B. of P. records at 21.177 lbs. milk. His butter, A 3 yrs. B. of M. 472 lbs. milk. Also, 15 Pure Bred Holsteins, grand Bull sired by Woodland Baroanet Lad. Write for prices and particulars. Ainslie, H. A. PATER & Co., Aylmer, Ont. R. R. No. 1.

Great Herd Header for Sale

One of the best young Holstein Bulls to be found anywhere I am offering for sale. He is 2 yrs. old, weighs 215 lbs., the best of official backing. His dam, Lady Baggie De Kol, made 68.53 lbs. milk; 7.7 lbs. butter in 7 days. He averages over all, two years in succession, 1908-1909 in dairy test, Guelph, Ont. He is the best 12 months old, sound and sure. Write for price, or better still, come and see him. H. J. KELLY, Campbelltown Farm, ONT. R. R. No. 1.

High Testing Bred Heifer at head of Lynden Holsteins

Lulu Ganser, 25.77 lbs. of butter in 7 days testing 4.3 per cent. fat. 115.177 lbs. of milk. DeBoer, 23 lbs. butter 7 days testing 4.3 per cent. fat. This is the best milk yielding in Canada. Buy a bull to head your herd, a full brother to the above. Also a son of him from a 27.35 lb. dam testing 4.3 per cent. fat at 11 years of age. Record in Canada by a cow over 10 years old. Also bull outstanding and see them. Within 1 mile of station. S. LEMON, LYNDEN, ONTARIO

THICK, SWOLLEN GLANDS

That makes a horse Weak, Sick, Nervous and makes him lose weight. Also any Runch or Swelling. No matter how long it has been there, we will show you how to cure it. Buy a box of ABSORBINE. ABSORBINE, J.R. Remont for mankind. Cures Croup, Whooping Cough, Sore Throat, Yaws, Venereal Disease, Itching and Ringworm, and all other skin diseases. W. F. YOUNG, P.O. Box 1330 and 1120, Montreal, C.



\$3 a Day Sure

Send us your address. We will show you how to get \$3 a day sure. Double the work and you get \$3 a day sure. The complete fully equipped and guaranteed a clear profit of \$1 to \$2 every day. REGAL MANUFACTURING CO., Box 1114, WILSON, ONT.

HORSES

One hundred registered Clydesdale horses sold on the local exchange here offered \$400 a head. About half went to the west and the rest remained in Ontario. An average of quotations on unregistered horses would be about as follows: Choice heavy drafters, \$200 to \$310; fair, \$175 to \$200; med. weight, \$170 to \$300; agricultural, good, \$150 to \$250; fair, \$100 to \$150; express horses, \$175 to \$200; drivers and saddlers, \$140 to \$200.

LIVE STOCK

Prices of live stock are steady to a li-

NEWVERMIFUGE

The best and most effective remedy for bots and other worms in horses. (Guaranteed by the Farmers' Horse Remedy Co. under the Pure Food and Drugs Act, June 30, 1906, Serial No. 31911). It is guaranteed to kill and bring from the body dead in from 18 to 24 hours all pin worms and bots.

It is absolutely harmless and can be given to mares in foal before the eighth month. Practical horse owners have written us Newvermifuge has removed from 500 and 600 bots and worms from a single horse. An animal whose stomach is full of worms cannot get fat or keep being obstinate, feed four or five days. Beware of imitations.

5 capsules, \$1.50; 12 capsules, \$3.00
Farmers' Horse Remedy Co., Dept. A. & S., 182 - 7th St., Milwaukee, Wisconsin.

Bickmore's GALL CURE



Be sure and work the horse
The soothing, healing ointment works a speedy cure of Galls, Cuts, Sores and Wounds. Cures white ring of Galls, ring of the world. Cures what you work the horse. Buy it and be ready for emergencies. Sold by dealers generally. Trial sample sent for 2c. postage. Get it and test it. Address
Wingate Chemical Company, Ltd., 341 Stone Lane St. W., Montreal, Can.

Mr. Farmer, Listen!

Would you like to receive one of Wilson's GOLD MEDAL Scales



Delivered right to your nearest station! FREIGHT PAID BY WILSON. That's our offer! Write to-day for our special Prices. 100 different styles of Hay and C. WILSON & SONS Ltd. 200 St. E. TORONTO

HAWK BICYCLES

An up-to-date High Grade Bicycle with *Woolf* *Port* *Down* *New* *Departure* *Coaster* *Brake* and *High* *Delicately* *Tired*, high grade equipment, including *Mudguard*, *Pump* and *Tools*. \$22.50 for *100* pages of *Bicycles*, *Sundries* and *Repair* *Manuals*. You can buy your supplies from us at Wholesale Prices.
T. W. BOYD & SON, 27 Notre Dame West, Montreal.



Let an I H C Engine Save You Hours of Drudgery

WHY should you waste hours of valuable time sawing wood, pumping water, shelling corn, or turning a grindstone by hand when a few cents' worth of gasoline in an I H C engine will do it all and let you use your time for important, profitable work? An I H C gasoline engine will furnish cheap, steady, dependable power for running the pump, wood-saw, feed grinder, corn sheller, grindstone, emery wheel, cream separator, churn, washing machine, wringer, etc. It furnishes power to sharpen plows and disks, light farm buildings, and do many other kinds of work.

I H C Gasoline Engines

are simple. They are economical of fuel. They are made in all styles, vertical and horizontal, portable and stationary, air and water-cooled, in sizes from 1 to 50-H. P., to operate on gas, gasoline, naphtha, kerosene, distillate, or alcohol. Gasoline and kerosene tractors, 12 to 45-H. P. Sawing, pumping, spraying, grinding outfits, etc.

The I H C local agent will show you the engine and explain its good points. For catalogues and full information, see him, or write the nearest branch house:

CANADIAN BRANCH HOUSES:
International Harvester Company of America (Incorporated)
At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Bay, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Windsor, Yorkton.

I H C Service Bureau
The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U.S.A.



The "Bissell" is a 3-drum roller

3 DRUMS make the best Land Roller. It is easy to understand how the "Bissell" Roller with 3 drums and supported by 6 heads is a STRONGER IMPLEMENT than any 2 drum Roller on the market. With 3 drums the centre bearing is not needed. When the "Bissell" Roller is at work, the axle turns with the drums.

It costs more to manufacture the 3 drum Roller than the 2 drum, but you pay no more for the "Bissell" 3 drum and get BETTER VALUE FOR YOUR MONEY. You get heavier weight in the "Bissell" drums too.

The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off

with a Roller unless the name "Bissell" is plainly stencilled thereon.



Grass Seeder Attachment furnished if required. Write Dept. 8 for free catalogue. 63

T. E. BISSELL CO., LIMITED, ELORA, ONT.

Increases the Flow of Milk



Molasses Meal is a profitable feed for the dairy man to give his cows, on account of its great palatability, ease of digestion and health producing qualities. It increases the flow of milk and improves the flavor of both cheese and butter.

Caldwell's Molasses Meal

increases the feeding value of hay, oats and chop. It contains no spices or drugs. Over 80 per cent. pure cane molasses. Feed it regularly to your cows and they will yield you more profits. They will also be kept free from milk fever, flatulency, etc. Mail the coupon and we'll send you an interesting booklet and particulars about buying Molasses Meal direct from the mill at close prices.

Please send me booklet and full particulars about buying Molasses Meal direct from the mill.

Name.....
Post Office.....
County.....
Province.....
Farm and Dairy

The Caldwell Feed Co.

Limited
Dundas - Ont.



AYRSHIRES
Entire Herd at Auction

W. J. CARLYLE, CHESTERVILLE, ONT.

Will Sell at Public Auction his Entire Herd of Pure-Bred, Registered Ayrshires, Including the Great Cow BUTTERCUP, on

Wednesday, March 13, 1912

The herd includes 25 head. Five of the cows have passed the Record of Performance test with good margins to the good. Heading this herd is the imported bull **AUCHENBRAIN ALBERT**, bred by that **FAMOUS SCOTCH** breeder, Robert Wallace. This bull is close to a perfect model of Ayrshire type and is noted for the practical dairy qualities of his get.

The noted cow **BUTTERCUP** will be on sale. She has a record of 76 lbs. milk in one day, 830 lbs. milk in nine days, an average of 70 lbs. a day. In 284 days, she gave 10,844 lbs. milk—a big record considering that no special effort was made to force this cow.

The other cows in R. of P. have made equally creditable records in their various classes.

Nothing but continued ill-health, which forces me to seek a different climate, could induce me to part with these cattle.

Catalogues of sale giving full particulars will be furnished on application to

W. J. CARLYLE, CHESTERVILLE, ONTARIO

It is desirable to mention the name of this publication when writing to advertisers

the higher. 7 local lines of the railway men's last yards were, it is many more the observance advanced mat almost down now have the deliveries are The strongest in butcher can little higher, enough for anything but An average of \$5.75; med. to \$6.25; cho. med., \$5 to \$5.50; \$5.25 to \$5.60; \$5.50; feeders, to \$5.25; canners. Milk cows, \$2 to \$70 for cho. med. and \$40 to \$6.90 to \$6.90. The demand shipments from have been a few in quoted at \$4.75, \$5.25 to \$5.75. Calves are \$4 and quality. Light delivery market up, \$5.50 to \$6.70 \$6.90 to \$7 on The cattle market and steady and good, but not really choice this is the kind manding. But changed hands that all the work to quality. Cho. \$5.75; med. 50; bulls, \$5.50 to \$5.25. Quot. Choice, \$7 to \$65, and spring sheep offered \$4.50 to \$4.75; \$4.25; and lambs. Buffalo Live to \$2; butcher lambs, \$7 to \$5 ewes, \$2 to \$4. \$7.50; mixed, \$6.

MONTHLY Montreal, St. Not here this very active supply, which is as a consequence from 25 to 50 offered has been at \$7.25 to weighed off correct advanced in price higher cost of shattels stock. Country dressed are quoted at \$5.

MONTHLY The market for ing to the Great stock of Canada haunted, and New Zealand 1. The arrivals of been very satisfactory the exception the salted for the Quotations are most quality, able at \$5. 2. Not look for prices, and as

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With

the higher. The fact that many of the local lines of railroad were blocked led the railway companies to refuse shipments last week. Deliveries at the stock yards were, in consequence, the smallest in many months. Had it not been for the observance of Lent prices would have advanced materially, but the small demand relieved the situation. From the consignee's point of view and kept prices almost down to normal. The railways now have their lines clear and heavier deliveries are expected this week.

The strongest advance of last week was in butcher cattle. Exporters also were a little higher. Dealers were not anxious enough for supplies to advance prices on anything but the highest quality stock. An average of quotations would be about as follows: Butcher cattle, choice, \$6 to \$6.75; med. to good, \$5 to \$5.90; butchers' cows, choice, \$4.75 to \$5.50; com. to med., \$3 to \$4.50; export cattle, choice, \$6.25 to \$6.90; med., \$5.55 to \$6.30; bulls, \$5.25 to \$5.60; butchers' bulls, \$3.50 to \$5.00; feeders, \$3.50 to \$4; stockers, \$3.25 to \$3.55; canners, \$2 to \$2.75.

Milk cows are in good demand at \$50 to \$70 for choice, \$30 to \$45 for com. to med., and \$40 to \$60 for springers.

The demand for mutton continues firm. Shipments from United States points are being a feature of the trade. Ewes are quoted at \$4.50 to \$5.25; bucks and cubs, \$3.25 to \$4; lambs, \$4 to \$5. Calves are \$4 to \$8.50 according to size and quality.

Light deliveries of hogs pushed the market up. Packers are now paying \$5.50 to \$6.70 f.o.b. country points and \$6.50 to \$7 on the market.

The cattle market at Montreal is strong and steady and receipts have been fairly good, but not quite up to the average. Really choice stock is hard to get, and this is the kind that all buyers are demanding. Butchers' cattle, well fitted, changed hands at \$7 to \$7.75 and from that all the way down to \$3.50 according to quality. Choice cows sold at \$5.25 to \$5.75; med. quality, \$3.75 to \$4.75, and bulls, \$3.50 to \$5.50. Canners are \$2.75 to \$3.25. Quotations on milch cows are: Choice, \$75 to \$85; com. to med., \$65 to \$85, and springers, \$30 to \$45. The few sheep offered sold at firm prices: Ewes, \$4.50 to \$4.75; bucks and cubs, \$3.75 to \$4.25; and lambs, \$6.50 to \$7.

Buffalo Live Stock: Prime steers, \$7.50 to \$8; butcher grades, \$3.50 to \$7; choice lambs, \$7 to \$7.25; yearlings, \$7 to \$7.50; ewes, \$2 to \$4.75; hogs, Yorkers, \$6.00 to \$7.10; mixed, \$6.50 to \$7.

MONTREAL PIG MARKET
Montreal, Saturday, March 2.—The market here this week for live hogs has been very active and more than equal to the supply, which has been rather light, and as a consequence, prices have advanced from 25c to 50c a cwt., and everything offered has been picked up by the packers at \$7.25 to \$7.50 for selected, lots weighed off cars. Dressed hogs have also advanced in price in sympathy with the higher cost of live hogs, and fresh-killed shabster stock is quoted at \$10.50 to \$10.75. Country dressed are in small supply and are quoted at \$9.50 to \$9.75.

MONTREAL BUTTER MARKET
Montreal, Saturday, March 2.—The market for butter here is firm, owing to the great scarcity of supplies. The stock of Canadian butter is almost exhausted, and the trade is going on to New Zealand butter to a large extent. The arrivals of New Zealand butters have been very satisfactory in quality, with the exception that they are rather mildly salted for the general trade in Montreal. Quotations are firm at 33.50c to 34c for best quality, with a few lots obtainable at 35c. The trade in general does not look for any further advance in price, and as soon as the supply of

home-made butter increases, we can look for lower prices.

SALE DATES CLAIMED
April 4, 1912, J. W. McCormick, Morewood, Ont., Holsteins.

March 26, 1912: S. Macklin, Weston, Ont., Holsteins.

March 27, 1912: C. C. Kettle, Wilsonville, Ont., Holsteins and Yorkshires.

March 14, 1912: G. Forester, Gormley, Ont., Holsteins.

BANQUET TO MR. NEIL SANGSTER
Admirer and breeder of Holsteins. Little feel much elated over the victory of that breed at the recent Ottawa Live Stock Show. Holstein breeders in the Eastern Township of Quebec are particularly elated over the fact that the champion cow, Rhoda's Queen, was bred and is owned by a breeder in their own section, Mr. Neil Sangster of Ormstown. They expressed their appreciation of Mr. Sangster's good work by sending him a banquet on February 22nd at the National House at Ormstown. Among those present were: Dr. John Watson, Dr. A. McCormick, and Messrs. D. H. Brown, Arch. Bell, J. J. Tannahill, John Herdman, E. S. Crutchfield, Geo. Winter, Sr., M. McArthur, and Angus Clisholm, Rutherford, John Mellie, Arch. McDonald, E. Watson, Thomas Watson, Alex. and Robert McArthur, Andrew Clisholm, James G. Winter, Geo. Winter, Jr., Arch. McNeil, John Cullen, James Cowan, George Smith, C. Colburn, David Cowan, Robert English, Jas. G. Dickson, Robert Barr, George Elliot, George Sadler, George Simpson, James Bell, Frank St. Louis, William Tait, W. Rice, Hanson Elliot, D. McMillan, Colin McMillan, James Howden, J. J. Alexander, James Alexander, D. McEwen, Dr. McLaren, E. W. Morgan and Ward Anderson.

Dr. Peter McLaren occupied the chair and in a few remarks warmly congratulated Mr. Sangster on his success at Ottawa. In his reply to the toast, "Our Guest," Mr. Sangster said that after listening to the remarks of his friends and with the possession of two champion cows, he felt that he was the richest man on earth. He was prouder of the honor done him that night by his fellow farmers than of all the prizes he had ever won. Several of the guests spoke later in the evening, and all had one theme, the appreciation of Mr. Sangster's work and of the breed of cattle that he won with the Holsteins.

MR. FORESTER'S HOLSTEINS AT AUCTION

Mr. Geo. Forester of Gormley, Ont., is retiring from farming and will dispose of his entire herd of Holstein-Friesian cattle at his farm on March 14th. Other than the particulars given in his advertisement elsewhere in this issue, Farm and Dairy readers will be interested to know that these cattle of Mr. Forester's are a splendid lot.

Mr. Forester has been very particular in the selection of the best to head his herd. Much of the young stock in the sale is from Inks Hengerveld De Kol, bought from the Breeding Farm, Ont., and sired by Count De Kol Pieterje Paul. The dam of this sire has a record of 21.95 lbs. butter and 37 lbs. milk in seven days. She calved shortly after calving, and after milking eight and one-half months and within three and a half months of her calving was again re-tested and made 15.14 lbs. butter in seven days, which record up to that time was the largest made in Canada, and at the time it was made was the largest ever made in the United States.

Catalogues giving full particulars of each of the individual Holsteins offered in this sale may be had on application to Mr. Geo. Forester at Gormley, Ont.



Lump Rock Salt, 48.00 for ten tons, f.o.b. Toronto
Toronto Salt Works, 125 Adelaide St. E., G. J. CLIFF, Manager Toronto, Ont.

GETTING TIRED?
Are you getting tired of waiting for buyers to come along? Don't wait for them. Do like other progressive breeders do: Go after them. The beauty of this medium for you is that advertising rates are within your reach, and get you many buyers. Space like this, each week, costs you only 20 cents in Farm and Dairy, and reaches nearly 13,000 possible buyers. Better send your ad. today—Farm and Dairy, Petersboro, Ont.

Holsteins
Great Dispersion Sale
ON
Thursday, April 4, 1912

I will offer at Public Auction my entire herd, consisting of sixty-five head of richly bred, registered Holstein-Friesian Cattle.

I have carefully studied the advantages derived from breeding from high testing and large milk-producing strains, and can now offer to the public a choice lot of animals.

Parties desiring choice individuals to swell their herds or anyone anxious to obtain good foundation stock should attend this sale.

Apply for Catalogues early and as soon as ready a copy will be mailed to you.

For further particulars apply to:
J. W. McCORMICK - BROOKLAND FARM MOREWOOD - ONT.

REGISTERED
3 HOLSTEINS
Combination Prize Winning and Milk Record Cattle
WILL BE SOLD AT PUBLIC AUCTION
Tuesday, March 26th
Being the entire celebrated herd of **S. MACKLIN - Weston, Ontario**

The offering includes Eight Heifers by that famous Bull, SCHUILING SIR POSCH, twice Grand Champion at Toronto. These are of the low down, blocky and straight type that can win anywhere in the show ring. They are splendid producers milking up over 60 lbs. a day as 2-yr.-olds. (See catalogue for full particulars of 7 day and other official records.)

BELLE POSCH, one of these heifers, was Jr. Champion at Toronto as a yearling.

MURIEL POSCH, another, as a 3-yr.-old last year, was first at Toronto. She milked 60 lbs. a day last year in August.

There will be 21 Milking Cows in sale, also

The stock bull, **CORA'S BRIGHTEST CANARY**—four nearest dams average over 27.5 lbs. butter in 7 days.

Have been offered \$5,000 cash for this lot, but preferred to sell them by auction and let all have the opportunity to get this richly bred, high producing and prize winning stock. Watch Farm and Dairy reading columns for further particulars, and write at once for catalogue.

S. MACKLIN - Weston, Ontario

RUSSELL'S SECOND ANNUAL SALE DECORATION DAY
MAY 30, 1912

100 Head of Officially Tested Cows or daughters of officially tested cows will be sold. No Males.
If you do not find something in the sale, you will have another hundred or more to choose from. Every animal on the farm for sale.
T. H. Russell, Geneva, Ohio, U. S. A.
This is not a Consignment Sale but every animal is owned by me

AYRSHIRES

CALEDONIA SPRINGS HOTEL CO. Has for sale two Ayrshire bull calves of 11 months, of good parentage, one from Ohio B.O.P. Test 5414 lbs. in 304 days. Price, \$30 each.

Also two bull calves of 6 and 8 weeks, of good parentage, registered. Price, \$25 each. Apply MANAGER, CALEDONIA SPRINGS, ONT.

THE SPRINGBANK HERD OF AYRSHIRES

Contains more World's Champion milk and butter producers than any other herd in America. A few choice bull calves from record breaking dams for sale at reasonable prices. Address: Manager

A. S. TURNER & SON, Ryckman's Corners, Ont 3 miles south of Hamilton.

CHOICE AYRSHIRES

Are Bred at "CHERRY BANK"

A few young bull calves for sale. Write for prices. P. D. McARTHUR, North Georgetown, Howick Station on G. T. Ry. Que.

AYRSHIRES AND YORKSHIRES

For sale—High class Ayrshires, all ages, including Calf and Bulls fit for service. First prize Yorkshire cow, age 3 years. Send in your orders now for pigs to be shipped in March, April and May; price, \$5 each. Registered in name of purchaser. Apply to Mon. W. OWEN, or to ROBERT BINTON, Proprietor, River Side Farm - MONTEBELLO, Que.

Ayrshires

World's Champion herd for milk and production. Some young bulls and bull calves, all from B.O.P. cows for sale. grandson of Primrose of Tangwylwyd in the lot. Address: WOODDISSE BROS., Tangwylwyd Farm ROTHSAY, ONTARIO

LAKESIDE AYRSHIRES

We have a number of fine young bulls of different ages, all sired by our imported bull and the majority of them from dams entered or qualified for the record of performance. To make room for the winter we have prepared and offer these at attractive prices.

LAKESIDE FARM, PHILIPSBURG, QUE GEO. H. MONTGOMERY, Prop., 164 St. James St., Montreal

CITY VIEW AYRSHIRES.

8 B. O. P. cows and two-year-old heifers for sale; one yearling bull and a line lot of 191 bull calves. Prices reasonable. Write or phone.

JAMES BEGG, R. R. No. 1, St. Thomas.

SUNNYSIDE AYRSHIRES.

Imported and home bred, are of the choicest breeding of good type and have been selected for production. THREE young bulls dropped this fall, sired by "Nether Hill Good-time"—2641—(Imp.), as well as a few females of various ages, for sale. Write or come and see. J. W. LOGAN, Howick Station, Que (Phone in house.) 1-61

Ayrshires For Sale

Bred for production and profit. Special offering 3 bulls, 10 months old, weighing one and one four-year-old stock but also some choice B.B.P. Cockerels. Write GEO. H. STORES, Oakland Stock & Dairy Farm, Twiss, Ont Bell Phone.

Burnside Ayrshires

Winners in the show ring and dairy tests. Animals of both sexes. Imported or Canadian bred, for sale. Long distance phone in house.

R. R. NESS, HOWICK, QUE.

AYRSHIRE BULLS

Two April, Bull bulls—one a very choice son of Annie Laurel 3rd (B. of P. 7,728 lb. milk and 32 lb. butter as a 2 year old), by the champion record producer "Scottie," 4000 lbs. dam, Annie Laurel 2nd (B. of P. 14,134 lb. milk and 696 lb. butter). Other bull, a beautiful son of King's 3rd of Neidpath (B. of P. 11,903 lb. milk and 43 lb. butter) by the champion of the celebrated Auchanbairn imported Kintyre. W. W. BALLANTYNE, Phone. STURTFORD, ONT.

FOR SALE AND WANT ADVERTISING

TWO CENTS A WORD, CASH WITH ORDER

BARRED PLYMOUTH ROCKS—High grade cockerels and pullets for sale at moderate prices. Satisfaction guaranteed.—Leslie Kerns, Freeman, Ont.

WANTED—Experienced man and woman to work on farm. State wages wanted. Address: Lowland Farm, Hillhurst, Que.

WANTED—Assistant Buttermaker for Scotchness Creamery. Apply, stating experience and salary wanted.—Geo. Jaques, Whitehorse, Ont.

FOR SALE—Iron pipe, Pulley, Belling, Rails, Chain Wire, Iron Posts, etc., all sizes, very cheap. Send for list, stating what you want. The Imperial Waste and Metal Co., Dept. F.D., Queen Street, Montreal.

CREAMERY MANAGER WANTED

For Scotchness Creamery. Duties to commence April 1st. A thoroughly competent, practical man required; permanent position, twelve months of the year. Cream gathering system. Buttermaker kept. Make for 1911, 17,067 lbs., and good chance for large increase. Manager required to look after the entire business, under approval of the Board of Directors. Apply, with references, experience, etc., with full particulars in first letter, and to THE SCOTSBURG CREAMERY CO., Ltd. SCOTSBURG, NOVA SCOTIA.

Creamery and Cheese Factory

For Sale or Rent—New buildings and machinery. Prospects about 500-600 cows. Good price for making. Easy terms.—W. S. Downham, 442 Waterloo St., London, Ont.

Seed Oats and Barley

Siberian oats (test 35 lbs. or over), 70c per bushel, 41 bushels and 125c per bushel. Clean. Pure stock from selected seed. A. HUTCHINSON, MOUNT FOREST, ONT. Member C.S.O.A.

BUILD CONCRETE SILOS

Any size with the London Adjoining Silos. Breeding and 125c per bushel. Clean. Pure stock from selected seed. A. HUTCHINSON, MOUNT FOREST, ONT. Member C.S.O.A.

MISCELLANEOUS

JERSEYS GOLDEN FERN LAD STRAIN OF HIGHLY PRODUCERS

We have for sale 4 Yearling Bulls ready for service; 4 Yearling Heifers; Calves, both male and female; and females of all ages, either side. Visit our herd (40 cows now milking). Write us about Jerseys you want. D. DUNCAN, DON P.O., ONT.

MERTON LODGE

is now offering registered Tamworths of the finest breeding and a line lot of Young sows bred to farrow in April; boars ready for service and young pigs of all ages, either side. Safe delivery guaranteed. W. W. GEORGE, CRAWFORD, ONT.

AYRSHIRES OF ALL AGES

Three bulls, one rising two years. These are bred from deep milking stock and First Prize Winners. Good tests and high testing, 4 1/2 to 5 1/2. For information I have to show 22 first prize won at three of the Fall fairs of the surrounding counties. J. O'CONNOR, CAMPBELLFORD, ONT.

AYRSHIRES Young Bulls and heifers of good type and breeding not akin.

YORKSHIRES—Owens and Heifers of different ages. Orders looked for spring. Jan. and Feb., 1912, pigs of both sexes on hand. Write or phone for prices. ALEX HUME & CO., MENIE, ONT. Board's Station, G.T.R.

ALFALFA

GOLD BRAND macquillined 9 Binds Ordinary Alfalfa magnified 9 times

If you have decided to have a field of this grand clover, secure good cream of the crop. It grades Extra No. 1, Government Standard. That means that it is free from noxious weed seeds and is a fine, healthy, plump seed that will germinate up near the 100 per cent. point. Buy Early.

BUY EARLY

State what you want—what quality you want—and we will send you samples and quote prices delivered at your nearest station. Herewith find prices, good for one week from date of issue of this paper. If you live in Ontario and order 100 lbs. or more of our best brands of Clover and Timothy, we will pay the freight, otherwise our prices are ex warehouse, Toronto.

"Star" brand Red Clover at \$15.00 per bush. "Gold" brand Alfalfa 12.00 per bush. "Ocean" brand Alalike 14.00 per bush. "Diamond" brand Timothy 9.00 per bush. "Sun" brand Mammoth 15.00 per bush. Allow 25c for each cotton bag required.

These brands all grade No. 1 Government Standard. They are the best of the season's crop. Order Promptly. You will be pleased with delivery

Get our catalogue and see what we have to offer in Fertilizers, Potash Acid Phosphate and Nitrate of

GEO. KEITH AND SONS Seed Merchants Since 1866 124 King St. East, TORONTO

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 2 insertions during twelve months.

HOLSTEINS—Young stock, for sale. Sired by Imperia, Faldine Dekol, whose 1st nearest dams average 25 lbs. butter in 7 days.—H. W. Walker, Utica, Ont.

HAMPSHIRE PIGS—Canadian Champion herd. Boar head headers. Fows, three months and under.—Hastings Bros., Crosshill, Ont.

HOLSTEINS AND TAMWORTHS—All ages, also B.C.W. Lathams. Young stock for sale at any time.—J. McKenzie, Willowdale, Ontario.

LIVE STOCK AUCTIONEERS

We are in a position to handle your sale of cattle in an up-to-date manner. Especially qualified to sell Holsteins. F. H. McCullough & Son, Napan, Ont

HOLSTEIN BREEDERS' CLUB BELLEVILLE DISTRICT

SECOND ANNUAL CONSIGNMENT SALE Belleville, Ont., April 3, 1912 For information apply to F. R. Mallory, Sec.-Treas., Frankford, Ont.

RIVERSIDE HOLSTEINS

Herd headed by Prince De Koi Pasch, dam was champion two years in succession at Guelph Dairy Test. King, Johnstone, His dam is sister to two World's Champion 37-lb Cows. Pontiac, King and Pontiac. Young Bulls 6-7 females for sale. J. W. RICHARDSON - Caledonia, Ont.

LAKESIDE DAIRY AND STOCK FARM

Present offering, Bull Calves from Record of Performance Also a few females.

W. F. BELL, BRITANNIA BAY, ONT Ottawa Bell Phone.

STOCK MARKS. Metal ear tags for cattle, sheep and hogs, all appended separately against both sides and long. Sample and circular sent on request. F. G. James, Bowmanville, Ont

AVIATION

Farm and stock... A big argument... the old life is the... Mr. Alex. Hume... well-known Ayr... of short fields... an editor of F... Hume's stock... showing the re... good care in... herd at present... Twenty-five of... Mr. Hume's r... is well-known... be confirmation... then judged by... their showing... at show, the... ll. Among th... attention wa... the record. This... this, she was a... two-year-old... fair. She will... year. She is... lined, strong... strong middle... kinds of feeding... she produced th... or cent. milk a... run. In fact, al... test 4 per cent... possessed of be... ability to perfor... the strong bod... splendid square... which the best... As a two-year-... of milk in less... than nine month... of milk.

Good Feed

Hume's females... strong cows with... situation and feed... the best under... the well balance... so necessary to... two-year-olds are... Five-month of... Lenden's Roy... due to soil in... these heifers ar... performance cow... good one. Mr... of these.

The bull that... in Auchanbairn... bull is only th... already possess... gives every ind... an extra large... a strong, mascul... great heart girt... and is an extra... believes that this... to produce larg... same time good... animals.

A particularly

Sprightly Spire... record last fall... his own use. A... same sire as th... Junior, is for m... head any herd... The calves we... growthy lot. An... particularly... Royal Monarch... living a youngste... some time. A n... spring calves th... for sale also at... tion. The calves... five-circles were... strong follows th... cows. Ayrshire b... a few good ones... a better than m... inspect his herd.

Mr. Hume is a... Yorkshires, and... type. He has a... litters, and young... for sale

WIDEN'S Bird-Proof Barn Door Hanger. CLOGGED. Tumbler Ball-Trap. Can't Get Off the Track. No other barn Door Hanger on the market positively and permanently overcomes all the troubles of clogging by either birds in summer or by snow and ice in winter. There's no opening in the Louden Bird-Proof Track, except a narrow slit. It is made of your hard work getting and never a time and money to put in Louden's Tubular Steel Straps and Stanchions, Feed and Litter Carriers, Hay Carriers and Balance Scales or Double Hangers. See them at your dealer's. If he can't see our line write us for Free catalogue and list of 300 numbers.

Louden Machinery Co. Dept. 502 GUELPH, ONT. 33

AYRSHIRE NEWS

Farm and Dairy is the recognized... of the Canadian Ayrshire breeders' Association...

ALEX. HUME'S AYRSHIRES

A big argument for corn, clover and the also is the splendid condition in which Mr. Alex. Hume, of Menie, Ont., has his well-known Ayrshire herd...

Mr. Hume's record as a showyard winner is well known... of conformation and type that win out when judged by outward appearance only...

Female of Warwickshire is another matron possessed of both show type and the ability to perform at the stall. She is the strong body, true lines and the square, well placed udder...

Good Females All Through

The males might be said to get all Mr. Hume's females. They are straight, strong cows with every indication of constitution and feeding capacity...

The Bull that at present heads the herd is Auchenbraun Hercules (Imp.)...

A particularly nice yearling bull, Sprightly Spicy Sam, that was third at Toronto last fall. Mr. Hume is offering for his own use. Another yearling by the same sire as this young bull, Spicy Sam Junior, is for sale and is good enough for any herd.

The calves were a particularly good, growthy lot. Among the fall calves was a particularly nice one by Levenock Royal Monarch. She is about as promising a youngster as we have seen in some time. A nice bunch of four heifer spring calves that Mr. Hume is offering for sale also attracted favorable attention.

Mr. Hume is also a breeder of pure bred Yorkshire pigs of the best type. He has at present a couple of litters, and young ones of both sexes are for sale.

IS THIS A RECORD?

A heifer with which W. H. Cherry of Garnet, Ont., won third place in the two-year-old class at the Guelph Dairy test. She made some records to be proud of. In the three days of the test at Guelph she made 165.5 lbs. of 17 per cent. milk...

Farm and Dairy hits the nail on the head every time. It is the most distinguished fighter for farmer rights I know of.—K. Paul, Simcoe Co., Ont.

RELIABILITY

A feature you can count on when you buy a "BAKER" WIND ENGINE



Baker mills have no freak features to exploit. The man who buys this mill makes a good investment. He does not take a chance. The quality, efficiency and reliability of the "Baker" are "known quantities" in keeping with our past record of over 30 years.

ball-bearing turntable and self-regulating device. All working parts covered with a cast iron shield, thus protecting same from ice and sleet.

THE HELLER-ALLER CO. Windsor, Ontario

"It Took Me Fifty Years to Know How to Give You Better Roofs than any of Other Men"

"I tell you, every Canadian in Canada should realize the big share a roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farms roofs is one of the biggest things ever done for people who farm."

"You ask me why a barn roof is so important. I will tell you. You best a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left alone. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

This Took 50 Years

"You are beginning to get a better idea of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands fire, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

Stands the Arctic

"This roof is so good that the Canadian Government, Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and snow formations to stand up under. The North West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof in the milder climate of the rest of Canada."

Stands the Tropics

"That is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Port-au-Prince, Jamaica. My roof stands it. Here in Jamaica during rainy season at Montego Bay, rain falls 10 inches in a week. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall that is usual in 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctic and Tropics good enough for you? Get you exactly the same article, made on the same machines."

A Roof for any Man

See What a Good Roof Can Do!

"I have spent my life making a low cost roof that any man or his tinmith could lay right through. It is made of nine nails the stuff stored under it. It saves the barn from heat and beams. It saves the foundation from the water article, made on the same machines."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks. If you have had it up a year or two, it is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that roof, and your son will use that roof, and your grandson will use that barn before that 'last year' comes. I want to point the fact that that is about the price of an ordinary roof."

"That is why I say, 'I have been making my roof better than any man can do.' My roof will protect a good \$100,000 of produce in your barn in 100 years."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch on a roof that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right, but that is what I had been making that design better for fifty years. At last I struck a blow in Europe."

"You know they have cathe-drals there that are hundreds of years old. Yet the iron hinges on the door are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of metal, so my roof will last like those door hinges?' Well, sir, that is a hard job. It was hard to get that iron duplicated, I worked for a long time and I



chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it to-day. I lost the metal I use to-day."

You Get the Benefit

"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can get a hundred and say, 'I want a some to-day year roof at about the price I would pay for cedar shingles.' I am the only man that can deliver that kind of roof. My roof will not rust to the looking point within 100 years. It saves the barn and its produce from the weather. It saves the barn from raw-water and leakage, because the seams cannot be damaged anywhere. It saves the barn from fire, because sparks cannot get in. My roof will not burn, it or the barn under it. Lightning cannot burn my roof with my roof on it. My roof is a perfect conductor of electricity. My roof will give you a lot of help and treat, and protect in winter and summer. It protects even though the rafters are in winter and summer. It protects even though my roof that is a hard job. It was hard to get that iron duplicated, I worked for a long time and I

Get My Barn Book

"I want to send you my book, 'ROOFING RIGHT.' This book will tell you more facts about the Pedlar Roof. You will get clean ideas. It gives the best criteria water you can get on it, it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free to a farmer who asks me, because you can plan your barn roof in 10 days. You use my 100-year roof or not. Write to-day."

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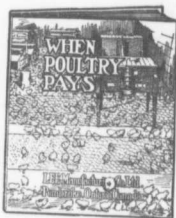
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MAKE THE PEERLESS WAY WORK FOR YOU AND INCREASE YOUR PROFITS FROM POULTRY



YOU don't need to be told that the biggest fortunes are made by those who put to work for themselves, the knowledge of other people. You can put our knowledge to work for you and have The Peerless Way help you to increase your poultry-profits. Don't waste time in poultrying by trying to learn alone; begin where we have left off. Take the experience that we have acquired in operating the largest and most successful poultry farm in the Dominion—the Poultry Yards of Canada, Limited—and apply it to your own use. Over 20,846 Canadian poultrymen are now following our methods and, through The Peerless Way, with its co-operat-

WHEN POULTRY PAYS" is a book that tells how you can put The Peerless Way to work for yourself. Please observe that this book is not The Peerless Way itself; it is the history of The Peerless Way, rather. It does tell, however, of the success of hundreds who have adopted our methods and of how we, ourselves, have made our own poultry farm grow to the biggest in Canada; and it tells how your own success can be made to equal ours.



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"When Poultry Pays" tells you all about the Peerless Incubator and Brooder which have made The Peerless Way possible; it tells you why you cannot make a success of Canadian poultrying with incubators and brooders designed for warmer climates where there are no long, cold winters, and just how and why the Peerless is adapted to this climate. Remember, this book is a practical, common-sense treatise throughout and to the man who has a little money, average common-sense and a willingness to look after his business, it is a genuine guide to an unworked field of profit right at his own door.

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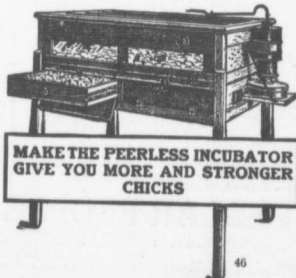
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marketing plans are selling direct to the highest-cash-price-market and making more money than they could ever have made the old way selling to the middleman or the cold storage dealer. With the supply of Canadian poultry products equal to only one-third of the demand, we have realized the need for showing farmers the big profits that lie in this field of golden opportunity. But even the 20,846 we have started right, have not made a dent in the market, so rapidly is the country growing and the demand increasing. YOU can make money in poultrying—right now; and you can make greater profits every year. The Peerless Way will teach you how you can duplicate our big success, how you can increase your output at higher prices and how you can double or treble your profits.



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Our Co-operative Marketing Plan Will Get You Higher Prices

THE extra few cents' profit that you might have had—but which go to the cold-storage buyer and middleman—represent but a small per cent. of your total selling price. But they represent a very, very big percentage of your profits—and it is profits you are after. Through our Co-Operative Marketing Plan, we can put you in touch with buyers who will take your whole output—great or small—at highest, spot-cash, market prices and charge you no commission. This is merely one detail of the service of The Peerless Way.

Profit Lies In Knowledge—Let Us Show You

IF you are keeping poultry now, you may not be able to see how you could double or treble your profits. If you knew how, you would do it—naturally. But you don't know. The Peerless Way will teach you the organized, highly systematized methods that govern the largest and most successful poultry farm in the Dominion—the Poultry Yards of Canada, Limited. It will not only show you how to raise more poultry and increase your egg production, but it will also show you a market twice as big again as your present market—and will show you how to take advantage of it.

20,846 Poultrymen Follow The Peerless Way

IN every part of Canada are followers of this new method of more intensive poultrying. They have succeeded. You can, too. All you have to do is to follow the instruction given free by our Poultry Advisory Board and you can't fail. Or, if you prefer, you can come to Pembroke and, for a moderate tuition fee, take a special course at our poultry farm. But don't get the idea that you must do this; you can learn just as much from a careful study of The Peerless Way right at home—use the coupon.

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