

Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto

Thin the Apples if Too Thick.

There are some very good reasons why it will pay to thin the fruit on the apple trees, if too thick. Where spraying is followed it is very common for trees to overproduce if thinning is not done, for not much fruit falls. An overload makes the fruit inferior in size and quality.

Orchard men who have thinned overladen trees say thinning is a saving of labor instead of an increase of labor as many contend it is. The picking of small fruits and the extra care in grading at harvest time will more than make up for the additional labor of thinning. Where tests have been made it was found that in some cases the saving in labor was twice as much as cost of thinning, when all the work of picking, culling and packing was taken into consideration; and this did not count the profit from the better fruit.

If you will stop to consider, you can readily see that there would be a big difference between picking three or four small apples or one big one, and in culling out the hundred and one kinds of duds caused by crowding. I saw an unthinned orchard last summer in which not half the apples were of anything like a perfect shape. I doubt if more than twenty per cent. of the fruit would sell as first class, and probably none would if the size were to be considered closely; and that orchard had been sprayed well and the trees were healthy.

Overcropping will often result in no crop at all the following year; if the fruit is properly thinned the trees will bear again unless from some other cause. It is no uncommon thing to find sprayed orchards where some varieties that naturally set too much fruit have tried to mature so much fruit that they bear only every other year. This does not pay. Try thinning one year, keep tabs on the labor, and you will see that it pays in the long run, even if you have only a few trees and are producing fruit for home use only.

Milking Machines Are Dependable Helpers.

Within the last four months I have visited twenty dairy farms where milking machines are in use. I have not heard a word of dissatisfaction from one of the twenty users; every user has said, but not in so many words, that his milking machine is a dependable helper.

The testimony of these twenty users only strengthens my belief that in a herd of not less than fifteen cows a milking machine is a paying investment. Where there is a gasoline engine or a motor on the farm, so that a milking machine does not call for extra power, a herd of twelve cows is large enough to make a milking machine pay.

The principal things that make milking machines such dependable help, according to the testimony of these twenty men, are as follows:

1. Machine milking takes less time than hand milking.
2. The last cow milks as easy as the first; consequently there is no tending to slight the last cow, as in hand milking.
3. It is easier to get hired help on a dairy farm where cows are milked by machinery.
4. One man can take care of more cows with a milking machine, thus cutting down overhead expenses per cow.

Poultry

Idleness must be discouraged in the broods which are confined, as it is almost certain to lead the chicks into evil ways—bad habits.

Too pecking and other forms of cannibalism are invariably the products of injudicious feeding and idleness. Harmlessly inclined at first, a few chicks will pick at another's toes; an abrasion starts; the victim's toes commence to bleed, the sight of which seems to thrill the rest of the flock with a bloodthirsty impulse; they get a taste of the blood and fight viciously for it, until very soon their victim is rendered helpless and subsequently is partially devoured.

In a surprisingly short time the habit spreads throughout the entire flock, and where chicks are brooded

5. Cows have less udder trouble when properly milked by machinery.
6. Hard-milking cows, or cows with tender udders or sore teats, are more readily milked by machinery.
7. Machines are more dependable than hired men.
8. Cleaner milk is possible with machine milking, if the machines are properly cared for.
9. Take a great deal of drudgery out of dairying.
10. It costs less to milk by machinery.

Where the milking machines are used, considerable extra time and labor are involved in washing and caring for the machines. But the time required for this work is made up many times in the greater speed of milking with machines.

The opinion of most of the users with whom I talked is that the success of a milking machine depends almost entirely on the man who uses it. The worst thing that can happen is to have a green hand or careless hand operate a machine. The character of work done by a good machine is no better than the care it gets.

"My advice to any man who expects to buy a milking machine," said one man with whom I talked, "is to be sure he understands the machine. A milking machine, like a cream separator, or more so, is an abomination if not kept clean. It is up to the man who buys the machine to make a success of machine milking. The milking machines of twenty-five years ago were jokes. Those of today are nearly mechanically perfect."

Age When Fruit Trees Bear.

Reckoning the age of a tree from the time when it is planted in its permanent place, apple trees should begin to bear as a rule when they have been planted from six to eight years. Certain varieties, such as the Yellow Transparent and Wagener, may bear considerably younger; others, such as the Northern Spy, not until they are somewhat older. Individual trees of the same variety vary somewhat in this respect.

Pear trees bear, in general, at about the same age as apple trees, though perhaps a little younger.

Peach trees under favorable conditions often bear at three years of age, and in any event they should bear at four years, unless injured by frost or otherwise.

Plums vary considerably according to the group to which they belong, but most sorts begin to bear in four or five years after planting.

Sour cherries ordinarily begin to bear in about four years and sweet cherries at six or seven years after planting.

Apriots come into bearing at about the same age as peaches, or a little later.

Quinces are usually five or six years old before they bear much fruit. Raspberries, blackberries and dewberries, if planted in the spring, should bear a light crop the next year.

Strawberries planted in the spring, or early enough in the autumn to make a good growth before the advent of cold weather, should produce a crop the next season.

Currants and gooseberries commonly bear a few fruits the third season after planting.

Grapes may bear very lightly the third season, where conditions are favorable, but not much fruit should be expected earlier than the fourth year.

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Hoos

One often hears the statement made that it does not pay to give pigs more than the most ordinary attention and the farmer can scarcely be blamed in this respect if his hired help is inexperienced and yet has to be paid as high a wage as a real good experienced man.

The keeping of a few pigs is practically always a paying proposition but, to make it more so, means must be resorted to whereby the labor can be reduced to a minimum, particularly as the pigs are apt to receive the scantiest of attention in any case. Towards this end, therefore, it seems only natural to try to find out just how well pigs will thrive if allowed to feed themselves. By feeding them a "self-feeder" method whereby the pigs are allowed access to a limited supply of dry feed whenever they feel so inclined. This system is of value to the breeder who goes in for swine-raising on a large scale and also to the small farmer who has other countless duties to perform but finds the feeding of pigs the worst chore of all. The latter might find the "self-feeder" of great value, particularly in reducing expenses.

With a view to gaining some definite information on the use of the "self-feeder" for swine, experiments have been carried on at the Experimental Farm, Agassiz, B.C., for several seasons. Comparisons have been made in the use of the "self-feeder" as against the trough-feeding method. As far as cost of feed is concerned, results go to show very little difference one way or the other, but when the labor question is considered, the value of the "self-feeder" cannot be ignored. This comparison of the "self-feeder" with the trough-feeding method is being continued until absolute and definite results are obtained, but up-to-date, however, the advantages of the "self-feeder" have been strikingly evident.

With all classes of feeders this device can be used to advantage, while it also may be made use of in the feeding of young sows up to breeding age. With mature breeding stock, however, it is wise to avoid the use of the "self-feeder."

The "self-feeder" for swine has many features to commend it, one of the most important being the fact that, of all farm animals, none adapt themselves so profitably to this method as do swine. Where only two or three pigs are kept, the use of a "self-feeder" can hardly be recommended but, with more than ten pigs the adoption of a "self-feeder" is well worth a trial. Finally, as a means towards the reduction of the labor expense, the "self-feeder" has a distinct advantage over hand-feeding methods.

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in large numbers, as they are round stoves, the floor of the brooder compartment will be the scene of numerous gatherings of chicks fighting and tumbling over themselves in frenzied attacks upon unfortunates that are powerless to resist them.

Brooder operators are cautioned to keep on the lookout for the first signs of this habit, and to isolate the ring-leaders at once. If a chick is injured in any way, especially if there is any blood showing, isolate it, to forestall an outbreak of cannibalism.

Changing the diet sometimes checks cannibalism. Increase the amount of milk or beef scrap, or both; reduce the grain ration; if a mash is fed it is well to make it a light feed, such as coarse-flake bran and meal alfalfa. The beef scrap may be added to this mixture.

Buy Thrift Stamps.

Harnessing the Brook.

What can you do with a water-wheel, and what sort of a stream do you need?

Well, one man that I know has a stream two feet wide and six inches deep, flowing at the rate of two feet a second. With a fall of seven feet, this will drive an overshot wheel and generate one and one-half horsepower, or light twenty lamps.

The first cost of such a wheel is considerably more than a gasoline engine of equal power, but a gallon of water costs nothing, whereas a gallon of gasoline or kerosene costs from twelve to fifty cents. The wheel can be geared to a line-shaft for pumping, running corn-grinders, etc.; or the electric current can be carried any distance by wire.

The same size brook with a greater fall will develop more power; or a much smaller brook with more fall will give the same power. Overshot wheels are usually best, so the experts say; but if you have a very slight fall (anything under three feet), a breast wheel is the only thing to use. I find. Where you have a fairly large stream I recommend a turbine wheel; it uses more water than the other types, but is cheaper.

"Suppose I have only a very small stream?" you ask.

Well, you can put in a small wheel, and let it drive an electric generator, to charge a storage battery; by running the generator more or less continuously you can store up plenty of light against the hours of darkness. Or, you can build a dam and store up the water in a mill-pond; this is a mighty good scheme, if you only want to run the wheel for a few hours at a time.

The ideal place for a water-wheel is where some little brook rushes down a hillside; then a small wooden dam and a short trough will carry the water directly to the top of the wheel.

But most of us aren't so well fixed, our brooks run through our flat fields, with very little fall. In such cases we will need to raise the level somewhat by building a dam in some convenient place; wood, stone, or concrete can be used for this. An earthen dam is all right, provided you make it thick enough; but be sure to dig a trench at the bottom, right across the brook, and puddle this tightly with clay. Also, be sure the dam is built of thick, clayey soil; sand, or humus, is too porous, and will let a lot of water leak out.

Probably you won't be able to get fall enough at the dam, so the water will have to be carried in a trough or pipe to some lower piece of ground.

Put Paint on Clean Surface.

It is common practice when we do an odd job of painting around the home to apply the paint without preparing the surface.

It is just as important that the surface be in good condition as it is that we select a good grade of paint—for no matter how good the paint, the result will be far from satisfactory if some attention is not given to this detail.

In the first place, the surface to be painted must be clean, dry and free from dust, grease and dirt. On new work, a thick coat of shellac should be applied to all knots and sappy places. On work that has been previously painted, use a wire brush to remove all loose particles. Spots that are entirely bare where the paint has chipped off, should be given a priming coat of paint reduced with turpentine.

The extra labor in thus properly preparing the surface will be more than justified in the durability of the paint coat and the smooth, uniform appearance of the finished surface.

Number of Shingles Required.

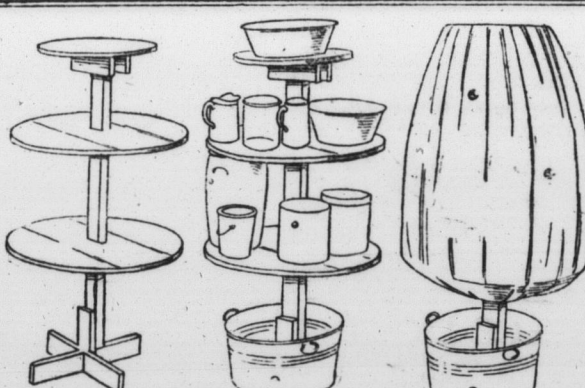
Average size of shingles, 4x16 inches, is taken as a basis of calculation. Laid four inches to the weather, 100 square feet of surface will require 900 shingles.

Laid four and one-half inches to the weather, 100 square feet will require 810 shingles.

Laid five inches to the weather, 100 square feet will require 720 shingles. Three and one-half pounds of four-penny nails are needed for laying 1,000 shingles.

From five to ten per cent. should be added to these figures to allow for waste and shortage.

The camera, as an aid to the farmer who wishes to keep a permanent record of his stock business, makes its bow for your approval.



Iceless Refrigerator a Home-Made Device

Country houses without ice-houses and too far from town to have access to ice supplies, may have an iceless refrigerator as a good substitute.

This convenience comprises a simple wooden frame with a covering of canvas, burlap, Indian head cloth, or linen flannel made to fit so that little air is admitted into it.

Wicks made of the same material as the cover are tacked on top of each side of the cover and extend over into the pan of water sitting on top of the frame. This water is taken up by the wicks and carried down on the sides of the cover by capillary attraction, when evaporation takes place, drawing the heat from the inside and lowering the temperature.

The more rapid the evaporation, the lower the temperature. Tests have shown that if the refrigerator is kept in a place where the air circulates

freely a temperature of fifty degrees Fahrenheit may be obtained.

When the frame is finished it should be painted white and enamelled. A covering of white canvas flannel is made to fit the frame, with the smooth side out, care being taken that the cover comes to the lower edge of the frame. The wicks are made half the length of the sides and tacked on the top edge of each side. They must be long enough to extend three inches along the water. Sew hooks and eyes that is left open to serve as a door.

The whole refrigerator should stand in a larger pan which catches the drippings from the cover and keeps away insects. Keep the refrigerator in a shady place where there is a free circulation of air. Keep the wicks in a supply of fresh water in the top pan.

The Welfare of the Home

Children at the Company Table.

Almost every one of us can look back on those times when, with black rebellion in our hearts, sitting at the table when there was company for dinner, we watched the grown-ups exclaim over the wonderful dessert that mother or Bridget had concocted, and tried to choke down our "nice prunes."

Of course, there are families where the children have their meals by themselves and are not allowed to come to the table with the rest of the family. But in most homes this is not true. All properly brought up children know perfectly well that there are a great many things that grown-ups may eat that they may not, and usually they do not mind. But when there is company, it does seem as if they should share in the fun.

The thoughtful mother will never begrudge the few extra minutes and the little extra work that will make the children feel that they are not abused. It really isn't much more trouble when you have everything out on the table Saturday and are baking the Sunday layer cake to mix up a single little sponge cake, or a brown sugar ginger bread, and bake it and ice it for the children.

Every mother who studies the care of children knows perfectly well that they should not have pie, but pie is usually daddy's favorite dessert, and when it comes on he makes a big fuss over it. Why not, on those days that you have pie, make one specially for the little folks? It isn't any more trouble than the usual rice pudding or custard. Cook some rice and when cold line a deep plate with it. Fill it with stewed fruit, apples, peaches or apricots, pour some soft custard over it, and cover with meringue. It is

delicious. And when cut in wedge-shaped pieces it will look like daddy's. I know one young mother of four who has bought four very pretty little fancy pudding molds, and when there is company for dinner she always makes blenheim, and molds it in them for the children. They are never used at any other time and it is such a treat that they never notice the more elaborate desserts of the guests, unless to be sorry for them.

Another mother with several little boys and girls, who entertains a lot, has made an institution at her home of what she calls Good Boy Tea. All it seems to be is the old-time cambric tea of my childhood, hot water with milk and sugar, but when it is drunk from a very pretty little china cup in the middle of the afternoon, with a lot of pretty ladies, who are sitting around in mother's living room, drinking, too, out of mother's best cups, it tastes like nectar and ambrosia. How much better, I think every time I go there and see them drinking their Good Boy Tea and eating little bread and butter sandwiches like grown-ups, is this way than to have them hanging around whining and begging for a bit of this and a piece of that, and getting it more often than not, just to keep peace, and then having to suffer afterward for the indulgence.

This same mother told me that she always bought some good hard candies whenever she bought a box of chocolates, wrapped them in gilt foil and put them in the box with the rest. It was understood that the "gold ones" were for the children exclusively, and no one was to touch them.

It is better worth while to think up some little trick like this than to make the children unhappy.

Nothing is more pressing at the present time than the study of ways and means to increase present food production. That Ontario soils are failing to yield their utmost, either in quantity or quality, is a fact recognized by careful students of crop and soil conditions. Indeed it is a fact that hits at the foundation of the progress of this Province and Dominion.

For the purpose of considering present soil conditions and making a somewhat extensive study of the fertility problem, the Canadian Fertilizer Association has called its second Annual Conference in co-operation with the Ontario Agricultural College at that Institution on June 16th to 18th inclusive.

The above Conference will consist of a gathering of scientists specially trained in various phases of science which have a bearing on farm production. It will also include a considerable number of practical successful farmers who are anxious to add to their practical experience some of the latest scientific information to the end that they may be able to increase and improve the products of their farms.

The program is open to the public and should prove of material interest to all directly or indirectly interested in this question of crop production.

The program includes among its prominent speakers Prof. G. W. Cavanaugh, head of the Chemistry Department of Cornell University, Dr. H. O. Buckman of the Department of Soil Technology, Cornell University, various members of the Faculty of the Ontario Agricultural College, Mr. A. H. McLennan, Vegetable Specialist of the Ontario Department of Agriculture and Mr. Henry G. Bell, Director Soil and Crop Improvement Bureau.

In addition to the foregoing, various representatives of the Canadian Fertilizer Industry will speak. Subjects of vital interest will be handled by the foregoing speakers. Such topics as the following are indicative of the nature of the Conference: "Changes and Losses that Certain Plant Nutrients Undergo in the Soil"; "The Physical Nature of the Soil and Some Fertilizer Relationships"; "Fertilizer Law and Its Interpretation"; "The Relation of Fertilizers to Labor"; "Line in Agriculture"; "Vegetable Growers' Problems in Soil Fertility"; "Fertilizer Theories and Practices."

Knockers never win and winners never knock.

Annual Climbing Vines

Nothing improves the appearance of a cottage so much as vines at porch or window. It is not always desirable to wait for the permanent climbers; the annual vines are quickly grown from seed. A combination of morning glory, cobaea, moonflower and wild cucumber will fill every want, though there are several other annual climbers just as desirable but not so well known. The scarlet bean will yield an abundance of flowers.

The young plants may be started more quickly if the seeds are planted in a hotbed or window. They can also be more easily protected while tender. Transplant them to the bed where they are to grow, before they have formed runners. A kind of bed of rich earth and well-rotted manure or leaf mold should be made at least two feet from the wall or porch columns. Unless there are gutters, the bed prepared for the vines should be well

outside the drip from the eaves. If the vines are to be on a protected side of the house, it is sometimes desirable to plant the seed directly in the bed where they are to grow.

One objection that has been advanced against vines is their tendency to discolor woodwork or even cause it to decay. With the proper trellising this will not result. Vines should not be allowed to touch the window casing or verandah columns. Set two posts in the ground, brace apart at the top by nailing on them a narrow board, and stretch light poultry netting across the frame thus made. The posts should be as high as the top of the window or eaves of the verandah, and should stand at least two feet from the wall. Vines thus trained will not only make a denser growth, but will allow a free circulation of air through the window. The shade will be effective and beautiful.

VACATIONING WITH CHILDREN

The sensible thing to do is to consider first what time it is best for summer recreation. If there are only a few days available it is unwise to spend the most of the spare time going and coming to some distant point.

The second thing to consider is money. How much of the family budget may wisely be spent on vacation?

To have a definite objective in view is to prevent frittering away time and money. If one is merely after change of scene, that is one thing. If he is after health, that is quite another. It is well to remember in the beginning that we pay for what we really need, whether we buy it or not. Sometimes we pay for it in cash and sometimes in lowered efficiency and sickness.

It is not always possible where there are little children to go away from home and to be as comfortably located at reasonable expense as under one's own roof. In that case day trips to some nearby beauty spot will afford pleasant change without too much effort. Sometimes a week-end trip from Saturday noon to Monday morning may be arranged and enjoyed by all.

It is certain that no mother anticipates with pleasure taking her little brood to some place where her own work will be made much harder, and she is bound to come home tired out. Conditions of this kind make a vacation a toil instead of a rest.

If a camp or a cottage is to be chosen for the summer vacation where there are few conveniences, see to it at least that there is an abundance of pure water nearby, comfortable beds, and an opportunity to get food supplies. A family can content itself to live simply, but there are certain things which must be had for health and comfort.

Babies are likely to be distressed by change of surroundings. Unless the change can be long enough to be of some real benefit, it is a question whether they are not better at home. The change of food is an important item. For a day or even a two days' trip, an infant's food may be prepared in the home kitchen and taken along, but if the vacation is to be a longer one, arrangements should be made in advance for baby's food supply.

The insects, especially mosquitoes, are often troublesome near the water and in the woods, and if the summer cottage is not provided with screens, mosquito netting should be taken along and tacked over the windows, for young children are often made irritable and restless by their sleep being disturbed by stings and bites. A little bottle of arsanol will often give relief if the spot is brushed with the liquid.

Young children can only eat certain foods with safety. It is easy enough to arrange these at home, but more difficult away from home. Among the forbidden foods for children under ten years of age are raw vegetables, such as celery, onions, cucumbers and tomatoes, or cooked ones, such as corn, old beans, cabbage, eggplant, lima beans, salads, hot brand, griddle cakes, rich cake, preserved fruits, rich desserts, pies, pastry, jam, nuts, rich candy, ham, sausage, liver, pork, kidney, wild game, dried and salted meats and greasy fish. Vegetables, such as may be given to children over seven but tomato soup, best left back until the children are old enough to digest it thoroughly.

See that the little people have their full amount of sleep or even a little more, for the extra excitement will tire them. When they are among strangers, it is an excellent thing to cultivate consideration for the rights of others, which when all is said and done, is the truest kind of politeness. Make the most of the opportunity to call their attention to little refinements of living which are enjoyable, and tend to make daily life harmonious. Children are quick to size and to remember.

If the outing is only for a single day, then each of the older children should be given certain responsibilities upon starting, that the one in charge of the party shall not be overburdened.

Mary, ten years old, is asked to keep track of her own belongings, which consist of a light coat, a little rubber-lined bag, with her bathing suit in it, and a small basket of sandwiches to eat as soon as the shore is reached. Mary is asked to remember that she is responsible for three things. James, eight, is proud to be given charge of a small suitcase with walls of paper fibre. In this is the rest of the lunch. As this is rather heavy, he is asked to look out for nothing else. Four-year-old Jane has a roomy string bag. In it are her sand pail, the shovel, spades and little molds for digging.

This leaves mother free to carry baby and to take on her arm a convenient and capacious knickknag of other necessities. Mary is asked to see that Jane keeps close to mother, and James is asked to look out for himself in this particular, and to be careful not to get separated from the party.

To a Baby. You are made of God's thoughts, And of angels' smiles, And songs that the nightingale sings, All rolled up together In rose petals pink, You Spirit of Beautiful Things!

Buy Thrift Stamps.