

Soils and Crops

By Agronomist.

This Department is for the use of our farm readers who want the advice of an expert on any question regarding soil, seed, crops, etc. If your question is of sufficient general interest, it will be answered through this column. If stamped and addressed envelope is enclosed with your letter, a complete answer will be mailed to you. Address Agronomist, care of Wilson Publishing Co., Ltd., 73 Adelaide St. W. Toronto.

The Milking Machine.

The experimental stage of milking with machines has passed. The scarcity of good milkers and the difficulties in distributing work on the dairy farm even throughout the year has prompted many dairy farmers to invest in milking machines. Reasoning stubbornly along the lines that it would cost more to operate the machines and do the necessary stripping, many dairy farmers have blinded themselves to the year's accomplishments. Perhaps, a few minutes are lost in preparing the cows and following the machines to get the strippings, but what is that compared with the tired hands and time spent in getting the bulk of the milk.

The milking machine is not fool-proof. A lot of good mechanics are not sufficiently in sympathy with the cows to make good milkers. Thousands of good milkers are not good enough mechanics to operate a milking machine successfully. The operator must be in sympathy with the cow so as to cater to her likes and dislikes and enough of a mechanic to keep his machine in condition to do good work. He must be both a cow man and a mechanic to get the best results with the mechanical milker. As a rule, failure results from the fact that the operator is a better mechanic than he is a cow man. The man who has milked the cows by hand knows their peculiarities and can adjust the machine to suit the different cows. Each cow must be handled and milked differently. If all of the cows are treated alike the machine cannot give its best results, but by understanding the cows and adjusting the machines properly any of the leading milking machines will do practical and profitable work.

Generally speaking the proper time to begin using the mechanical milker is about the time the cows remain normal condition after the freshening period. During the later part of the lactation period some of the cows are likely to hold up their milk often enough and long enough to cause them to dry up earlier than they otherwise would. At the beginning of the milking period the cows milk more nearly alike. The further the cows advance in the lactation period the more they differ in their peculiarities of milking. It is these peculiar traits that the machine operator must watch and endeavor to adjust the machine so that it will do its best work throughout the entire milking period.

Fitting the test cups to the cow and keeping close watch to see that the tests and udder are in normal condition are important points in operating the milking machine. The cups should fit the tests so that they will get a straight and proper grip and the pulsation of the machine should be regulated to suit the individual cows in the herd. The operator should understand how to adjust the machine to give the proper length of squeeze and length of release in order to make the machine do good work without discomfort to the cow. A short, quick pulsation is not suitable for a cow with long tests that is a hard milker. On the other hand, a long, slow pulsation is not suitable for a cow with short tests that give the milk easily. The man who operates the machine should know his cows and adjust the

machine to meet their individual requirements.

Always wash the cow's udders and moisten the teats before the milking begins. Then, if there is some disorder with the teats or udder, such as garget, or inflammation, she will attempt to kick or become uneasy. When the full milk stream is over strip the rest by hand. This gives an opportunity of becoming familiar with the cow's udder and knowing exactly its physical condition. It also trains the heifers to stand for either hand or mechanical milking. If any of the cows have udder trouble milk them by hand until they return to their normal condition.

Keep the test cups clean and sterilize them after each milking. Never use them on a cow that is affected with test or udder trouble. If properly cared for the test cups are not any more frequent distributors of bacteria than the milker's hands. Naturally, filthy, germ-laden test cups will set up infection in some form and the use of unsterilized test cups can have but one result finally. From careful examination of milking machines on many dairy farms it is a wonder that udder troubles are not more prevalent than they are.

A few objects to the milking machine because of hand-stripping to get the last few streams of milk. But no man can operate a milking machine successfully unless he keeps in close personal touch with the cows he is milking. An experienced man can operate the milking machine all day without becoming fatigued. He can strip the cows without becoming tired, but put him to milking all day and he will soon seek other employment.

The milking machine will make clean and sanitary milk and it has come to a time when many breeders of dairy cattle and producers of certified milk have found it necessary to use the machines or go out of business. The pails, being airtight, admit no dust and dirt, consequently there will be practically no sediment in the milk. The bacteria that enter the milk must come from the cow's teats and from the contact of the milk with the rubber tubing. In the mechanical milker the milk travels through about twenty-four inches of rubber tubing, which can be kept clean and sanitary. The other rubber tubing is for air, vacuum and pressure.

Many dairy farmers have a well-earned reputation for being careless with their machinery. Such men are sure to have trouble with their milking machines. Dirt, rust, violent jarring, filthy test cups and unsanitary rubber tubes will soon tell on any make of milking machine and result in unsatisfactory milk. Manufacturers are taking pains to put out good machines, and if properly cared for and intelligently operated, they can be depended on to last for years. Many a milking machine is condemned for defects which it develops under the blind eye of an owner who does not know how to use it. He blames it because he does not know his machine and his cows. Usually he makes matters worse when he tries to correct his failure to watch his cows' peculiarities by monkeying with the machine. While these machines require but slight attention, so far as ordinary work is concerned, they should be kept clean and have intelligent inspection at intervals.

Curing Meat.

In the making of good meat on the farm, curing is of the utmost importance.

Many farmers make the mistake of allowing meat to remain in the brine too long—to "take too much salt." For hams a good rule is to allow a day and a half for each pound of meat; for instance, eighteen days for a 12-pound ham. This is for ordinary winter weather where the meat is protected from freezing. If the weather is especially severe, or if the meat freezes, a longer time should be allowed. However, meat should not be allowed to freeze, provided it is possible to prevent it. In the "dry salt" method it is a good plan to pack the meat in a box and to repack at least once during the curing period. In repacking, the meat that was on top should be placed near the bottom, so as to insure even distribution of salt. Bacon or side meat that is to be used before summer should not be left in salt more than a week or ten days. Where bacon is to be carried into hot weather, two weeks' time is an average period. Sides should be split in two, having a thick or heavy, and a thin or light bacon. The "heavies" should be used or sold first, or a better plan is to render these into lard or to use a part in adding fat to the sausage.

Smoking has much to do with the flavor of country-cured meat, and especially hams. In smoking, almost any kind of hard wood can be used. Hickory and apple tree wood are among the best. The smoking from a smoldering fire should be kept up for a few hours each day for two or three weeks, the object being to allow the meat to take smoke gradually rather than to hasten the process. All meat should be hung some distance above the fire, and bacon should be near the roof of the smokehouse. Smoking should not be done on damp, "muggy" days or in rainy weather.

After the hams have been smoked sufficiently, wrap them in old newspapers and place in flour sacks, then hang up in a dark place. In packing it is a good plan to first dip each piece of meat in boiling hot water, then rub or wipe dry. Next cover the surface with black pepper. A little borax may also be added, rubbing it in with the pepper. Wet does not injure hams; in fact, a fair coat of mold is regarded by many as a hallmark of a good old ham. Bacon may be treated much as hams, but is best kept from getting strong if kept too long. Personally, we have never sacked or wrapped bacon, but prefer to leave it just as it comes from the smoke. Bacon is best used before the end of the first summer after being made, but a ham does not attain its best flavor under one year.

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Good Hardware Is a Good Investment.

"I want an easy spring-lock, pressed glass knobs, dull brass finish roses and key-plates," I said.

The hardware merchant grinned. "There you go again, asking for something you can't think we haven't got—but you can't catch me this time!" And with a triumphant air, he lifted down the things I wanted. "We're beginning to carry a better line of builders' hardware. Perhaps you will learn that it's economy to buy it, if some one will tell them how much better it is than the ordinary cheap stuff," he explained.

That last remark set me thinking. When I bought my farm I found the buildings made of pretty good materials—except, of course, for the hardware. Natural enough, of course, for how could the farmer owner learn about good hardware unless some one were to tell him? So, I'll tell our readers a little about good hardware, and why I always use it.

An easy spring-lock is an added spring to the latch; it is so adjusted that a very slight push will make the door close properly. You know, or your wife knows, how hard it is to keep the kitchen door shut, because it won't catch unless you slam it or turn the knob. And how annoying this is! You can't expect anything better with an ordinary lock; and yet an easy spring-lock will cost only a few cents more. You know, too, how soon rust begins to spoil the looks of your front door hardware and stain the paint. To prevent this we architects always specify that all outdoor hardware must be of bronze metal instead of iron. Sometimes a dishonest contractor will try to put in plated finish. Therefore, I carry a little magnet with me when I'm inspecting hardware; bronze metal won't stick to the magnet, but plated iron will.

I have a brass knocker on my front door; it gives a touch of refinement, besides being very practical. I prefer it to a door-bell; it never gets out of order.

Inside the house iron hardware will answer, with such finish plating as you choose. The various hardware companies have hundreds of different finishes. For white or mahogany-stained woodwork, I prefer dull brass plating, on oak or other natural finish. I generally use a dead black, a dull copper or dull brass. In a bathroom, a nickel-plated finish matches the plumbing fixtures.

Always steer clear of wooden door knobs; they become shabby so very soon. In the better rooms of my house I use pressed-glass knobs; they outlast any other sort (except under rough use), and add more to the looks of the home than almost any other thing. If you don't want glass, then use metal knobs.

The smaller pieces of hardware are important, too. Cheap cast-iron sash locks that snap at the slightest strain, drawer pulls that will hold only the tips of your fingers, clothes hooks that rust damp clothing—these are things too often seen. In my home the sash locks are strong and heavy; the drawer pulls are solid brass, of the drop-handle type, so one can get a good firm grip in the smallest strain; the clothes hooks in the bathroom are white enamel. Most of these things could not be bought in my town, so I went to the local hardware dealer and asked him to send out to me the next traveling salesman that came around. This salesman had some nice pieces of hardware, and he didn't bring. He went over my house, plans with me, and together we picked out the proper hardware; through my local dealer, he quoted a lump sum. I find it a very good way; you'll find it so, too.—W. D. B.

Add a little lemon juice to the water you cook a tough fowl in.

Never sugar stewed fruit until it has been removed from the stove. The flavor of the fruit will be better and it will not require as much sugar.

Wash leather furniture very gently with warm water in which there is a little vinegar, wipe with a dry cloth and then restore the polish by mixing the whites of two eggs and a little turpentine, which is applied with a flannel.

THE CHEERFUL CHERUB

I care not for public opinion,
So paltry is Fame or disgrace,
But I pray that I'll
always be able
To look all
the stars
in the face.

Health Talks

By John B. Huber, M.D.

Dr. Huber will answer all signed letters pertaining to Health. If your question is of general interest it will be answered through these columns. If not, it will be answered personally if stamped, addressed envelope is enclosed. Dr. Huber will not prescribe for individual cases or make diagnosis. Address Dr. John B. Huber, M.D., care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

What To Do For Pleurisy.

Here is clearly a disease for which the doctor must be called. Until he comes, however, much can be done. To relieve the acute pains we give ten grain doses of Dover's powder or half grain doses of codein. And we strap the chest where the pain is; we take strips of zinc adhesive plaster three inches wide and long enough to go half way round the chest. We lay the first of these, beginning with the spine, proceeding thence along the free border of the ribs of the affected side. We hold the strips tight at the back, and when the patient has fully exhaled (breathed out), and before he starts in on another breath, we rapidly and tightly bring around the strip under the armpit to the middle line in front. We start a second strip in the same way with the spine, placing it so that it half covers the first strip; and then as rapidly as we can, between one expiration and the next inspiration, we bring the strip also to the front. A third strip the same way, bringing it forward the same as the others, over the breastplate and, if need be, a fourth strip above that, always overlapping the previous strip half an inch. The patient must go to bed and he must have a purge (one ounce of epsom salts in a tumbler of cold water). A very simple diet is necessary.

If the trouble continues beyond several days, there is probably fluid forming. The doctor then either

prescribes medicines to absorb the fluid, or he taps the chest by means of a hollow needle and an aspirating (suction) apparatus. Previous to this operation he uses an exploring needle so as to locate the place where it is best to tap. Meanwhile he orders a dry, salt-free diet.

But supposing the exploring needle brings out pus; then the trouble is certainly empyema. In a few such cases, where the pus is very small in amount, it may become absorbed; in most cases, an operation under an anæsthetic is necessary, by which a portion of the patient's rib is removed and the patient's chest is drained of its abscess.

Questions and Answers.
Kindly send instructions for the cure of ringworm. Is it infectious? Should a child affected with it attend school?

Answer—This is a contagious skin disease due to a vegetable parasite having the magnificent name of *Microporum furfur*. The best treatment is to rub in fresh tincture of iodine by means of a cotton-tipped match. Some school doctors would keep the child away from school. I would not if the ringworms are thoroughly treated as above. There may have to be several applications a few days apart. At the conclusion of the treatment there must be vigorous cleansing with tincture of green soap and hot water. Every other child should have its own towel and drinking cup.

SAVING GARDEN ENDS

We are at the high tide of the kitchen garden's abundance, and it requires conscientious planning and much industry to avoid waste. The last word surely seems to have been said in regard to canned garden products, but enthusiasm should not wane now that the stress and strain of war summers is over. Can and preserve, while and strained in as great abundance as time and patience will allow. These "midgets" are a different proposition from the same ones full grown. Pick your string beans religiously and wash them; put them in a jar, cover with salt, and put down in acid. Save all the tomatoes you have care for—both whole and strained and flavored for soup. Just before frost, collect all sorts of delectable soup vegetables such as carrots, string beans and sieva or lima beans, small summer squashes, a cabbage or two, potatoes, sweet peppers, corn, celery stalks. Wash, pare, cook in a tomato foundation until they are tender. Add parsley, bay leaf, salt, pepper and sugar to taste, pack in sterilized jars boiling hot and seal. I have never lost a jar of this delicious combination soup canned by the open kettle method. If you prefer to feed doubly sure, take the additional precaution of an hour's extra sterilization by cold pack. Put the mixture into the jars boiling hot, just the same.

Before frost time, dig a trench in the garden and sink boxes of carrots, beets and turnips packed (dry) in excelsior. Cover with earth, then with leaves and when you take out the boxes in the spring you will find the vegetables crisp and fresh. I have vivid remembrance of the prices paid for carrots and turnips during the last two springs, and shall see to it that I conserve plenty of these homely vegetables for late use or sale. Carrots, parsnips, and salsify may also be packed in small boxes left outside to freeze, and brought in, a box at a time to thaw and use.

When harvesting potatoes—or buying them—store many of the small ones, which are much cheaper. These baked—helping by the big spoonful. Let some year heads, sievas, string and horticultural, ripen and dry. Early apples are abundant and how perishable, but they should not be allowed to rot and spoil! Can them for use next spring before the spring berries come. Pare, cut in eighths and pack in jars, fill up with syrup made up of apple sauce and can. Autumn windfalls also may be saved in the same way.

Bake big kettlefuls of cooking pears in the oven until rich and delicious, and put them into jars and can. Wild grapes are greatly preferable to "tame" ones, for jellies, jam, spiced grape. Cooking with a little water to start steam—mashing as they cook—until seeds are separated. Rub all through a sieve, add three-fourths measure of sugar, boil about fifteen minutes or until as thick as wished, can. If wild grapes are abundant, use some for grape juice. A good rule is as follows: stem and mash six pounds of grapes and boil until soft in one quart of water; strain and stand over night. Next morning strain again through three thicknesses of strainer cloth, add one pint of sugar, let boil up, and seal or can. Save any green tomatoes. Green grapes may be halved, stoned, cooked for about thirty five minutes

with their weight of sugar, adding two tablespoonfuls of water to start steam. They make an incomparable jam to use with meats. "Fox" grapes make a nice jelly; and the wild "beach plum" is delicious made into both jelly and jam. Wild blackberries and dewberries make fine jelly and jam, with a spicy "tang" and flavor all their own; and huckleberries, canned, make as nice pies and puddings in winter as when freshly picked. A very favorite pudding in my own family is made by alternating layers of hot canned huckle, or blackberries with slices of bread in a large deep bowl—using lots of juice—and letting it stand overnight or a few hours. Tip out as mold and serve with whipped cream.

Store as many green tomatoes, wrapped in tissue paper and packed in shallow boxes—as possible, to ripen and use through the late fall. Avail yourself of Government bulletins on the subjects of various economies, pickles, meat buying, canning and drying of vegetables, fruits and berries. It is a good thing we are following the example of our grandmothers who dried apples, peaches, pumpkin, corn, with great success. Corn should be cooked, cut from the cob and spread on cotton cloth over clean boards, platters, or drying trays and set in the sun; while drying, turn or stir well. This dried corn makes the most delicious succotash, combined with baking or other beans.

Apples are sliced, spread, turned, and dried similarly, also peaches; and housekeepers are experimenting in this direction in many ways. A friend tells me of her success in drying strawberries, which she has verified by soaking and stewing a few of the berries, the result being a delicious sauce. Other products which are dried successfully are potatoes, carrots, onions, Swiss chard, rhubarb, spinach, and so forth. When perfectly dried, pack in tin, paper or cloth bags, or glass jars. Always dry quantities of sage, parsley, mint and celery leaves for use as seasoning through the winter. Rub through the hands to pulverize and keep in baking-powder or coffee tins.

If one wishes to go into the drying process more scientifically and extensively, there are various drying outfits advertised as most successful. A home-made dryer may be made by tacking wire netting onto the bottom of a two-inch high oblong frame of any desired size.—F. T. E.

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A soothing application for burns should be in every kitchen. Here is a good one—mix the white of an egg with either olive or castor oil. It is very healing.

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FROM THE ANGLE OF BETHLEHEM

In the soft glow of a summer evening I rode yesterday from Jerusalem to Bethlehem. The distance is only a little more than five miles, along the main southern highway to Hebron. It was over this very road that Joseph and Mary and their faithful donkey went in haste the day before Christmas. The ancient well by the wayside is pointed out, with every degree of probability, as the one at which Mary refreshed herself. Near Bethlehem we pass the tomb of Rachel. Olive and vine-clad terraced hills surround the town, which is solidly built of the ubiquitous limestone of the land; the wise man builds his house on the rock—the underlying rock of Palestine—and of the rock as well. The stone is quarried soft and hardens upon exposure to the air.

In a limestone cave, which once was the room or stable of the Bethlehem inn, or khan, there was born nineteen centuries ago a Babe. Over that cave to-day there stands the oldest Christian church in the world, built in the reign of Constantine the Great, on the site of a still earlier construction. Since the capture of Jerusalem by General Allenby, certain unlooked-for evidences of ecclesiastical strife, notably the unsightly wall that divided the interior, have been removed. It is still necessary, though, to maintain a military guard at the manger to prevent sectarian strife, though now the soldiers are British, instead of Turks.

A silver star is set into the centre of the grooves beneath the church, and it is inscribed, "Hic de Virgine Maria Jesus Christus natus est." Around it burn perpetually the lamps of the Latin, Greek and Armenian churches. There is much ecclesiastical ornamentation. One can scarcely realize that at this holy spot the miracle of the ages was wrought; and that here was manifested the Son of God, the Saviour of the world. Here gathered the wondering shepherds from the neighboring hillsides. Over this town the mysterious celestial glory shone; and later the star rested. This is a focal point of the universe and of eternity.

What has all this got to do with the present time? Everything. Bethlehem manger has become central to a newly self-conscious world. The star that shone here nineteen centuries ago has become, as it were, the supreme luminary of a celestial system, drawing all lesser planets into its orbit and power. It represents the uplifted Christ who is to-day drawing all men unto Himself. Now, above all days that have ever been, is a time of the supremacy of the teaching and spirit and sacrifice of Jesus, once born in Bethlehem as a lowly mother's Babe. The heart-sore world is ready to say, with the shepherds, "Come, now, let us go into Bethlehem."

As of old, Paul heard Macedonia calling in a vision—that same poor, distraught Macedonia through which I have recently travelled—"Come over and help us." There is no thoughtful person intelligently reviewing the world's present condition who does not arrive at the conclusion that the greatest need of the nations is spiritual, and to be met only by a vitalized and present religion.

Upon returning from Bethlehem yesterday, and after dinner, I spent two hours in conversation with a staff captain in the British army, a cosmopolitan who had seen most of the problem places in the present world settlement. We discussed the national perplexities, one by one, and finally confessed ourselves baffled, until the soldier said—and he was not a religious man—"I tell you, this whole business will never be settled except on the basis of religion which will make people really friendly. There has got to be some great power to bring the spirit of brotherhood into all the world."

That interview was true to type. Over and over I find all sorts of men turning to religion as the solution of the present world chaos. Some express a desire for a new religion or a new prophet, or a new manifestation of all religions. In the speech of soldiers and statesmen and men of the world, the great affirmation of Christ is being echoed—mankind must be born again, and receive a new nature, before it can live a life of holiness and helpfulness and harmony.

That line of reasoning leads us straight to the conviction that the most important work in the world at the present time is to create Christians. When men and women are led to Christ they are led out of the selfishness and smallness and sordidness that now afflict society like a disease.

We cannot improve upon the Master's methods. Amid these hills of India and Galilee Jesus chose a dozen common men—just such looking men as are at this moment passing through the Jaffa Gate of Jerusalem, before my eyes—to be His friends and helpers. Association with Him made them uncommon men. Their discipleship led them into a service where they became a world-revolutionizing force.

Again we are at a plastic hour in history. New personalities are yet to emerge to lay a shaping hand upon events. Who knows that the young person who is to-day brought under the spell of Christ's leadership may not be a decisive factor in human destiny? We are serving the world in profoundest and most fundamental ways when we lead men into Christian allegiance.—William T. Ellis.

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