

Soils and Crops

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

Storing Seed Corn.

As soon as the corn ripens, go through the field with seed-picking bags and husk the ears from the stalks that have produced the best corn without having had special advantages such as space, moisture, or fertility.

Avoid large ears on stalks standing singly, with an unusual amount of space around them. Late-maturing plants with ears which are heavy because of an excessive amount of sap should be ignored.

All other things being equal, choose ears from short, thick stalks. These are not so easily blown down, permit thicker planting and, in general, are more productive than slender ones. Other things being equal, seed should be taken from stalks that have no suckers.

Immediately after the seed-corn is gathered, the husked ears should be put in a dry place where there is free circulation of air. Do not let ears touch each other. Good seed is repeatedly ruined, because it is thought to be dry enough when gathered. The vitality of seed is often reduced by leaving it in a sack or in a pile for even a day after gathering. During warm weather, if there is any moisture in the cobs and kernels, the ears heat or mildew in a remarkably short time.

The best possible treatment immediately after gathering is to string the ears and hang them in an open shed or loft. Wire racks are more convenient and, in the end, cheaper than binder twine. Such racks may be made from electrically welded lawn fencing. The cutting of the fencing into seed-corn racks is done without any waste. Only during unusually damp weather at seed-gathering time will fire be necessary to dry the seed.

After hanging in the shed or lying on the racks for two months, the seed-ears should be dry. They can remain where they dried or be stored in mouse-proof barrels, boxes, or crates during the winter. But in either case they must not be exposed to a damp atmosphere, for they will absorb moisture and be injured.

To keep weevils and grain moths from injuring stored grain, the thoroughly dried seed-ears should be stored in very tight mouse-proof receptacles with one pound of moth balls or naphthalene inclosed for each bushel of corn.

Transferring of Bees.

Transferring of bees from one hive to another should be done any time from the beginning of fruit bloom to the end of the clover honey flow. It is not advisable to attempt to transfer bees during the late summer or fall. There are several methods of transferring, each of which I will very briefly describe.

By the direct method the combs are cut out from the box hive or gum and the bees brushed from these combs into a modern hive which is placed in the exact location of the old hive. After the bees have all been transferred a queen excluding zinc should be placed over the entrance so that the queen cannot get out. This precaution will often prevent colonies from leaving the new hive. It is supposed that all of the frames in the new hive are fitted with full sheets of comb foundation. It is sometimes advisable to fill one of the frames with brood and honey taken from the old hive. This will provide food for a day or so and will usually prevent the colonies from leaving. This comb should later be removed. If the colony which is being transferred has any disease, then none of the comb should be taken to the new hive. Care must be used in this method, to see that at no time after the transferring the colony runs out of food.

The slow method is very popular with many beekeepers because of its simplicity. First remove a portion

Poultry

Market poultry requiring fattening must be fattened in coops or pens where they will receive little exercise. Green food is not of value in a fattening ration. In fact, it will only take up room in their crops which is needed for fat-producing foods. Fowls will increase in weight on a diet of corn meal and sour milk mash. The meal is better than whole corn. The high-producing hen has a full, bright, waxy comb and wattles. The face is thin and the beak, eye rings, ear lobes and face are pale. The good hen has a full ear lobe and a bright round eye. The hen that should be culled out of the flock will have small hard dried comb and wattles. The face will be fat and the beak, eye rings, ear lobes and face will be yellow. The ear lobes will be wrinkled and the eyes dull and snaky.

Clean, spray and sun the nests. Then fill them with plenty of clean

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of the brood comb from the centre of the hive to be transferred, examine it carefully for disease and if any disease is found this colony cannot be transferred by this method. If free from disease, tip the old hive upside down and set the new hive on top, placing a good cover over it. Before placing the new hive on top remove as much of the wood from the sides of the old hive as possible so as to let the light slip in between the combs. Bees do not like to work where exposed to the light and they will therefore abandon the old-hive much sooner and move up and take possession of the new one.

Make Inventory of Farm Flock.

On some farms at this time of the year the poultry flocks consist of two hundred to five hundred birds of all ages. Some will be early hatchlings. Others will be late hatchlings and of less value. Often the exact number of birds of all ages is not known and this makes the plans for fall and winter very uncertain.

It pays to check up all the birds at night and know exactly how many of each sex and age are on the farm. This not only helps to control poultry stealing from thieves and other pests but gives the farmer a definite idea of his poultry business for the coming year. The early-hatched pullets can be marked. Only save enough of them to fill the farm poultry house, allowing four square feet of floor space to each bird. Overcrowding is a sure method of reducing poultry profits. After culling the old hens and deciding which are to be saved for breeding stock, enough of the best pullets can be marked to fill the house.

Check over the cockerels and if none are to be saved to sell as breeders, save the best for home use and mark the remainder as soon as they reach the broiler age. This will save feed and give the pullets a better opportunity to develop if both sexes are using the same range. If enough early hatched birds have been produced it does not pay to save the late hatched stock and more annual income from poultry can be made by selling both the pullets and the cockerels from the late-hatched stock. In saving the cockerels for home use it pays to allow several extra birds to remain, as some may not turn out as well as expected and occasional accidents may injure some birds.

The custom of saving all of the pullets causes poultry losses. The pullets are always in demand by breeders who have not raised enough for their own use. Nothing is gained by keeping too many pullets for the housing capacity when some of them can be turned into cash while giving the remaining birds a chance to earn more cash.

The inventory tells the farmer just what he has for sale. On some farms raising large flocks of poultry the owners cannot guess within a hundred birds of the number on the range. If rats or weasels take birds the fact cannot be determined. If a poultry thief robs a colony house, the owner is not sure how many birds have been lost and the necessary protection will not be given to the flocks at night.

More profit will come from farm poultry raising when the flocks are culled early in the season. The birds to be saved can be banded and then the remainder can be sold as soon as they reach a marketable age, either as broiler meat or breeding stock. It is not the number of birds in the flock but the quality of the stock that determines the returns. Of course, a large flock of good birds will bring more money than a small flock but often a large flock of all ages running together eats up the profit from the good birds. The inventory enables the poultryman to save what he needs and give the remainder of the birds the prompt culling which brings in money and cuts feed bills.

litter. Half empty nests may result in broken eggs and this often teaches hens the egg-eating habit. Dirty nests will mean dirty eggs and they cannot be washed without destroying the protective film which nature has made to help keep an egg fresh and wholesome.

Hens have scaly legs because of a parasite which works beneath the scales. Sometimes wiping the legs with a rag soaked in kerosene oil will effect a cure. In severe cases the scales can be soaked up with warm water and soap and much of the incrustation removed. Then wipe them with lard and gasoline to kill the pests. When once removed the hens will have little trouble with scaly legs if the houses are clean and dry.

Genius has a twin brother whose name is patience.

Up to 1919, 88,000 children had passed through the 156 homes and branches of Dr. Barnardo's Homes.

Don't be like the farmer who carelessly sows thistle seeds in with his regular seeds and later complains because of a mixed harvest.

The most valuable printed work in the world is the copy of the Bible printed at Mainz in 1452-56, and commonly known as the Mazarin Bible.

Will They Say It of You?

A good farm is only the lengthening shadow of a good man. Do you own a good farm? Do folks say of your place, as they pass by, "There is the finest farm in this township"? Then you no doubt are proud, and have a right to be.

But stop a minute and ask this question: "How is it that my farm is such a good one?" I have not lived on it very long myself. The work I have done would not in itself have placed me where I am in the estimation of my neighbors. I found the farm quite as it is now. It pleased me and I bought it. Yes, some one else sowed, you reaped the harvest.

There was a day when a man with brawny arms and an axe over his shoulder came tramping through the woods just where your farm now lies. He brought his wife and little ones with him. His first work was to build them a tent of brush, with only a couple of hemlock for a roof. It was wet inside that simple home when it rained. More than one night the man sat at the door of his tent, gun in hand, keeping watch and ward over his dear ones, while wolves or fiercer foes woke the night echoes with their howling.

That man felled the trees, then logged them up and burned them to make room for a better home, and he did it with a song and a great hope in his heart. With the eye of a prophet and the heart of a viking he looked down the years and saw the farm that was to be. That was his life-work. An humble work, done with patience, and the greater because it was done out of love, for the sake of those who

came after he had laid down his axe for the last time.

That man's shadow, lengthening down the years, falls on the farm that is now yours. If he had gone round the hard places and left the trying things undone, it would have changed the entire drift of your life.

Now, this is your starting point. The pioneer of a hundred years ago did not do all that was to be done. He could not do more than he did. The hands with which he toiled were well-nigh bare of tools. An axe, a simple plow, a handsaw—these were his crude farm implements. His oxen helped him to roll up his logs to be burned. A stone with a hollow place chiseled out in the top was the mill in which his flinty pestle ground out the corn his Johnny-cake was made of. But he did his best and left the rest for you. How are you carrying on the work he began? Are you keeping pace with the march of present-day farm progress? Will the farm be better when the sunset hour comes to you? Which way will your shadow lie? East or west?

More than one man has tired before the day has come to its meridian. Faint of heart, he has sat down, folded his hands and said: "I am not going to do any more. Let somebody else go on with my work." Shadow lying toward the westward? Don't let it be so. Keep a brave, true heart! So the time will come when your shadow will lie far to the eastward, and men shall say of you, "He made his farm home one of earth's beauty spots. The world is the better for his having lived in it!"

Marketing Windfallen Apples

We always had more or less trouble getting rid of windfall apples. Quite often neighbors who had no fruit came along and we gave them many of these apples, and still do, but there is bound to be a surplus in bountiful years overcrowning our generosity.

We have at times turned the pigs into the orchard for a few hours each week, after gathering the best fruit, and let them clean up the surplus. It was a wasteful method, to our thinking, when people were hungry for apples.

It remained for a millhand from the city to solve the problem two years ago. He came out in an automobile to get some canning apples, and asked us what we did with our windfalls. We told him, and he said he would give us three cents a bushel for some of them, for he knew where a neighbor near him had a hand-press, and he would make them into cider for vinegar, which cost him sixty cents a gallon. We soon bargained, and to our surprise, when he came back the next day he brought four other millhands with him, and they took away in burlap bags all they could haul. They came back several times, and brought other workmen from the factory, and kept our orchard cleaned all fall of the objectionable windfalls, which we had not time to take care of in our labor in getting the good fruit cared for and marketed. This season we shall again depend upon these men, for we know they must be getting out of vinegar by this time.

Ventilators for Corn Crib.

An expert makes the following suggestions in regard to ventilators for cribs:

"Build an A-shaped frame through the entire centre of the crib, making it from fifteen to eighteen inches wide at the bottom, six inches wide at the top, and from five to eight feet high, depending on the height of the crib. About every four feet through the length of the crib build an A-shaft opening into this A-shaped tunnel at the bottom and running to the top of the crib. These shafts should be open at the corners, so as to allow plenty of opportunity for circulation of air through the corn."

Another type of ventilator which is just as effective, though more expensive but much more easily built, is made as follows:

Build a double wall, with the boards two inches apart, through the middle of the crib from end to end and from bottom to top. This can be made by using 2x4's for studding and rough 1x4's or 1x6's spaced two inches apart for walls. The 2x4 studding should be in pairs held apart by blocks, so that there will be a three or four-inch space between the studding. This will really divide each crib into two narrow cribs, three and one-half feet wide.

Compost for Garden.

Make a compost heap near or in your garden by piling a layer of soil on top of a layer of manure; then a layer of leaves or any organic matter; another layer of soil and some more organic matter, such as straw, stable manure, leaves, grass clippings, plant and meat wastes, ground bones, tree and shrubby clippings, all piled and mixed and allowed to decompose during winter. This heap should be turned over twice during the winter months and applied to the garden in the early spring. Compost is one of the best lawn fertilizers, and helps vegetable growth when scattered over the ground around young plants.

Swat the rats. Trap 'em, gas 'em—any way.

Get breeding ewes in thrifty condition.

The Welfare of the Home

How is Your Health? Are You Treating it Right?

By JESSIE LEITCH.

The girl who is so fortunate as to live on a farm has at her command all the conditions necessary for good health. Her work and her play are amid quiet, beautiful surroundings conducive to the mental poise and self-control so necessary to good health. Fresh air, good food, pure water, opportunity for sufficient rest and sleep, all are hers.

Her work with her chickens or flowers may sometimes be hard but how different it is from the dust and grime and turmoil of the city street or factory. During the crisp days of early fall her muscles are strengthened and her circulation improved by taking up the leaves in the yard, caring for the bulbs, covering the tender plants that they may survive the cold of winter and half a hundred out-of-door activities.

After the day's work is done, how invigorating is a brisk car ride on a moonlight autumn night! Horseback riding is again becoming popular and later there will be skating, coasting and sleigh rides.

City girls have little opportunity to study Nature, but the girl in the country can study Nature first-hand. She knows the fall flowers, how the little wood friends prepare for winter, and at night hears the calls of the birds overhead as they fly southward. The really fine country girl does not forget to give attention to personal hygiene. She cares for her teeth and nails, keeps her hair well brushed and is clean and neat at all times. Her sleeping room and the rooms in which she works are well ventilated and her habits are regular. The country girl's work and play when rightly carried on develop her mind and her spirit. Such development is the ideal of education.

Bandages are used to keep applications in place, to make compression, to control circulation and to reduce swelling and give support.

There are many kinds of bandages, but the only one that really concerns the nurse in the home are cotton and flannel bandages. These directions are for those who did not have the opportunity of learning how to bandage in Red Cross classes. Bandages vary in width. One inch wide for a finger, two or two and a half for the head and extremities is the average width in use. These are at least three yards long. Bandages must be rolled tightly before they can be used. Always remove wrappings from ends of a bandage.

Tear or cut bandage material in the desired widths and lengths. Then roll the bandages into a neat roll and pin securely. Always keep them on hand in your medicine cupboard, covered, to keep them clean.

In adjusting a bandage, put it on firmly but not so tightly as to impede circulation. Pin it with a safety pin, turning the ends in neatly. Flannel bandages are used more often for rheumatic cases. After applying a liniment and friction to the skin, a flannel bandage insures a uniform warmth of the affected part and is more comfortable than a cotton bandage would be.

Bandages should be rendered sterile. To render sterile is to destroy germs by boiling, by live steam, by steam under pressure, or by hot air. Thus we group the methods of destroying bacteria (germs) into two classes—physical and chemical.

The physical agents at our command for destroying the germs are light and heat.

Direct sunlight destroys bacteria

but the process of exposure is necessarily so long as to render sunlight impractical, particularly in the home.

Through the medium of heat, we have sterilization by (a) boiling; (b) live steam; (c) steam under pressure; (d) hot air or dry sterilization.

A doctor, when preparing instruments for use in a home, invariably boils them for a time. It is improbable that the mother will have occasion to sterilize by boiling; the better manner to sterilize towels, bandages or surgical dressings: such as one might need to prepare in the home is by the use of steam and dry heat. After preparing articles for sterilization wrap them in a thick cotton covering and pin them into bundles.

An ordinary colander is a good thing in which to sterilize. Steam for two hours then remove bundles. Spread them out on a clean pan and put in the oven until thoroughly dry. Put away in a clean pillow slip for future use.

An article subjected to a little dry heat without previous steaming is not sterilized. Steam is so much more penetrating than air that it accomplishes more in twenty minutes than dry heat can in an hour.

It will not be possible to use steam under pressure in a home, as this is done in hospitals by specially constructed sterilizers.

Alcohol and carbolic acid are probably the best disinfectants one can use in the household. If you spill carbolic acid upon your hands or skin, alcohol should be applied immediately. Alcohol neutralizes the hurtful action of carbolic acid. It is a good idea to keep alcohol and carbolic acid bottles side by side in the medicine cupboard. Carbolic acid is a dangerous poison. Act accordingly.

One teaspoonful of carbolic acid dissolved in one pint of boiling water makes a solution strong enough for ordinary purposes of disinfecting. This may be used for washing over bedsteads and floors in a sick room, or for disinfecting the hands.

It may seem unnecessary sometimes to sterilize or disinfect. Undoubtedly it causes extra work. But it is impossible to take too many precautions in avoiding infection.

Plant bulbs for outdoor spring blooming.

In these long autumn evenings read some good book on your job—farming or housekeeping. Or, if you have a hobby, get a book on that. Learn all there is to know about poultry, for instance, or violet raising, or rug-making, or textiles.

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OUT OF SETTING

"What is that square frame leaning against the wall there?" asked one of two boys as they walked down the street.

"That's a window," answered the other. "I saw Mr. George tearing down his workshop the other day. That must be one of the windows that he has brought home for some purpose. Let's go across the street and see."

So across the street the two boys went to examine the object of their conversation.

"Well, it is a window, as I thought."

"A window!" exclaimed the other. "It is a funny looking window, I think. You cannot see anything through it. I thought a window was to look out of. It does not keep out the cold. It does not let in the light. I thought that was one of the main things windows were for. It does not give us any security. It is not a part of a house at all. It just stands there all by itself. I do not see how you could have a window without a house."

A window cannot be a window standing all by itself. Maybe it was a window once, and it may be a window again; if Mr. George builds his garage in the back yard and puts this frame in one of the walls; but I do not see how you can call it a window now."

So the lad went on in his fun-making, and his companion could find no very satisfactory answers. That night when they were at their study, he remembered the conversation of the afternoon and, looking in his dictionary, found the definition of a window to be an opening in the wall of a building. Turning to his friend, he said, "I guess you were right this afternoon about the window. It seems that it was not a real window that we saw, but it was something that could be made to be a window with some work. It will be a window when Mr. George gets it built into his garage."

The question of the old window frame was settled. But, if the boys had only known it, they did more than settle the question of the window frame. They laid down a principle that will have an unmeasured influence in the lives of all human beings who will study and apply it.

There is a place and a great need for true men, and there is One who is able to construct true manhood; but it is not possible to be a true man outside of Jesus Christ. God has made every one. He has made us, not to stand by ourselves, but to live in Christ Jesus. That was the purpose, the plan, of God. He is constructing a building, fully framed together, and He has a place in that building for every one of us. We can be what He meant us to be only by filling the place that He means for us to fill. Standing alone, before it has been built into a house, but like the window frame, every one of us, by the wisdom and work of the Master, may have his life built into the house of God. So we shall be not just the frame of a man but a true man in Christ Jesus, complete in Him and He complete in us.

Are you satisfied, then, to go through life alone, the frame of a man but not a man, because you have not yet found your place in the plan and purpose of God? You cannot grow into a man outside of Christ any more than a window frame will become a window while leaning against the wall, but you will surely and truly become a man by finding your place in Him.

Save Your Cancelled Cheques

A number of years ago I had a settlement with a merchant with whom I had kept a running account for several years. Sometimes I paid the merchant by cheque; at other times I directed that my purchases be charged. Finally there came the time when I decided to close the account and start anew on a cash basis. The merchant gave me an itemized statement. This I compared with my cancelled cheques.

I found every item correct but one—a charge of \$10 that had clearly been paid by cheque. I showed the item to the merchant. He located the purchase easily and called my attention to the fact that it had been marked "Charged." However, my cheque bearing his indorsement was indisputable evidence that he had received the money. He credited me with an additional \$10.

I have found it a wise precaution to retain my cancelled cheques for several years. Nobody can tell in advance just when a cheque may be required as evidence. It is the safest means of guarding against paying an account the second time. My wife is as careful as I am in keeping her cheques. Recently she escaped the second paying of an interest charge because she had the cancelled cheque to show.

Always date your cheques accurately. Without the date the cheque as a receipt is only half good. It is a good plan to note somewhere upon the cheque the purpose for which it was given.

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