

# Soils and Crops

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

## Buying Nursery Stock.

Because of the high cost of nursery stock it seems that plantings have been reduced during the past few years. Many small fruit gardens have not been started. Some orchards have not been filled in where trees have died. Commercial orchards have not expanded as might have been the case if nursery stock had been cheaper.

At least some of the nursery companies are quoting stock at reduced prices. It will now pay the farmer to obtain catalogs and recent price lists and make at least some plans for increased plantings of first-class fruit. It pays to deal with reliable nurserymen who advertise in good farm papers. This is safer than buying of brokers who do not raise their own stock.

Tree agents are often criticized because of the poor quality of their stock. But an agent for a firm of known reliability is worthy of patronage. We should not fail to remember that many beautiful shrubs, profitable berry patches and thrifty orchard trees are growing now on farms where they would never have been planted had it not been for the persistent efforts of some nursery stock agent. Some of the agents may have sold poor varieties. But let us give the good ones a little credit for their work.

Nurserymen as a whole are very honest men who are in the business because they love fruit and flowers and like to deal in such products. They like to give satisfaction and do so in a large majority of cases. They know that their beautiful and expensive catalogs will not bring orders and repeat orders if they have the name of sending out poor quality stock that is not true to name.

Many of the offenses charged against nurserymen are due to carelessness on the part of the buyer. Possibly they may cover and expose the roots of trees so they dry out. Then some of the trees die and it is blamed on the nurseryman. Sometimes the name tags are left on trees until the trees struggle. When live stock get in a young orchard and trim the leaves from young growing trees, it places a tax on the strength of those trees and many of them may die.

Trees that are carelessly planted may fail to thrive. Some seasons are more favorable to tree growth than others. The value of nursery stock cannot be determined at the time of sale and this makes the purchase uncertain and gives a chance for future misunderstandings. Several years after trees have been planted the fruit may prove untrue to name. Often this is due to mistakes in the nursery. Sometimes it is the buyer's fault. He may forget what he ordered or forget which trees he planted in a certain plot. He may send only a small order in co-operation with a neighbor. They may divide the trees hurriedly without carefully studying the tags and each grower may plant the wrong variety.

It is difficult to tell the variety of fruit a young tree will produce by the appearance of a young tree and

only experienced fruit growers and nurserymen are able to tell and they might occasionally be mistaken. The inexperienced buyer has to place trust in the nurseryman at the time of sale and for several years afterward. It is not surprising that a few mistakes occur. It is a wonder that so many buyers of trees have such good luck as they do.

In buying nursery stock it pays to know the varieties of commercial importance which have succeeded in the neighborhood. Do not pick out your nursery stock entirely from the fine pictures that appear in the catalogues. The nurseryman and the experimental station can afford to make variety tests. The farmer can only do it on a very small scale. Even that does not pay unless there is time for experimenting and a deep interest in obtaining first-hand information.

Nursery companies are always presenting new varieties to the public and often wonderful claims are made. Sometimes the new varieties which were so loudly praised ten years ago will seldom be heard of now. It simply means that they didn't make good. But the old standard varieties are still for sale and proving fairly profitable whenever planted. Every once in a while a new fruit proves of unusual value and good enough to partially replace some older variety. Information about such fruits can usually be obtained from the experimental station. They have facilities for knowing how certain fruits are turning out and may be able to tell more about them than the nursery catalogues.

The farmer who expects to order nursery stock of certain new varieties should plan, if possible, to visit a practical grower who already has fruit of that variety in bearing. A very short visit will bring out points about growing, packing and marketing that variety of fruit which will prove useful information.

In the modern nursery every possible effort is made to keep the buds and scions carefully separated. The trees from which they come are carefully marked as to variety. It gives the buyer of nursery stock a large measure of safety. In the future growers may not be sorry if they make a few additional plantings of standard varieties during the coming spring.

## Fine Feathers or Eggs.

The exhibition and bred-to-lay qualities can be combined to some extent and it is often done, but the combination is not frequently obtained in the low-priced stock which makes up the bulk of the utility of farm flocks. Too often the farmer who wishes heavy egg-laying stock will buy an exhibition cockerel in preference to a cockerel from a high-producing hen.

The fine-looking bird may have no pedigree of value and yet it will look better. It is true that cockerels from high-producing hens seem to have the power of producing high-producing pullets. It might not always be true but it is the one cheap way we have of trying to improve our farm flocks. A cockerel from a fine laying hen is well worth trying out as a means of producing a more profitable farm flock. Experiments have proven that it often works successfully.

For example, the Barred Rock is a breed rather difficult for some beginners to handle because of the double mating system. They find it hard to produce the beautiful barred to the skin specimens which will. At the same time we find the Barred Rock a great favorite on the general farm. The farm flocks are not bred for exhibition but for eggs and meat. This year I have seen several farm breeders buy exhibition males with great pleasure and turn down males from a bred-to-lay flock because those birds were not as pretty and not barred to the skin like the fine quality exhibition stock.

## HIDES-WOOL-FURS

If you have one hide or skin or a dozen, ship them along. You will receive payment at the very highest market price. Try us with your next lot.

WILLIAM STONE SONS LIMITED  
WOODSTOCK, ONTARIO  
ESTABLISHED 1870

Of course all bred-to-lay birds should be very typical of the breed they represent. They must not look like scrubbers. But when a hen lays two hundred eggs or more she is of great value as a breeder if she is vigorous and her progeny are also producers. Such a hen should not be discarded because her head points and color are not a sure guarantee of a prize. If she can produce cockerels of great vigor and fair type for the breed, those cockerels should be given a chance to produce fine laying pullets. The best of them should be used even if they are inferior in markings to the birds in a prize-winning strain.

Every year fine-appearing birds are being located which are also good layers. Our best exhibition strains contain some good layers and they are being located and used to good advantage. But the buyer of a new cockerel must not expect exhibition appearance in the bred-to-lay bird, especially if the bird is bought at a

low price. If you wish winners you must go to the specialty breeders who are in that business. If you wish layers you must obtain stock of a bred-to-lay strain. Then do not kick if the bred-to-lay strain of cockerel does not win prizes. And do not expect the pullets from the exhibition cockerel to be high egg producers.

The combination of prize-winning and heavy laying is sometimes combined but as poultrymen we must have the best success in winning prizes when we strive for prizes alone. We are the most sure of high egg-producing flocks when we breed from the best layers and do not worry too much about the exhibition points. The breeders of one type are apt to make fun of the breeders of the other. But both have their place in the poultry world. What we need is more flocks with as much beauty as possible combined in hens that are high normal layers with the ability to produce offspring of similar quality.

## The Growing Child--Article VIII.

### Retardation.

Retardation is that condition or state in which a child finds himself when he fails to be promoted to the next higher class in school. He is then known as a "repeater," and some children "repeat" a grade two or more times. In every school system there is a certain percentage of retardation. Regularity of feeding should not cease when the child is weaned. Teach him to expect his meals at regular hours, and his appetite and digestion readily adapt themselves to a schedule that is strictly adhered to. Let the meals be cheerful, social occasions. The food is more easily digested when eaten in a happy atmosphere than when consumed in gloom or acrimonious argument.

To many children the failure to advance with the class to which they belong is a source of keen mortification, and the repetition of the same work has a demoralizing effect. Such children are apt to lose interest and ambition, and the effect on their character is very detrimental.

The causes of retardation may be found in the child, in the school or in the home. Mental or physical retardation may be unavoidable or preventable. If a child is actually of deficient mentality, retardation will inevitably show itself sooner or later. The only thing that can be done in such a case is to place the child in a special class or institution where he will receive such training as will fit him for any work which he is capable of doing.

However, many children are retarded who are quite normal mentally. The child with defective vision or hearing is very apt to fall behind his class because he fails to see or hear many things which the other children learn through sight or hearing. If he has obstructed breathing, due to adenoids, the sluggishness and inability to concentrate his attention may be partly responsible for his failure to make satisfactory progress. Defective teeth may possibly react on his health and frequently do keep him home because of toothache. In many cases malnutrition may be one of the causes of retardation.

The physical defects enumerated do not in every case cause retardation, but they are often associated with it so that their recognition and correction are imperatively demanded.

### General Home Care.

To secure the best results in health work among children there must be close co-operation between the home and the school. The work of the teacher will be much less difficult if the child has been trained in hygienic habits at home, and the mother will find her efforts supplemented and her work strengthened by the teaching of hygiene in the schools and the oversight of her child by the medical inspector and school nurse.

Among the factors affecting the health of the child which are entirely controlled by the home, sleep is important. Children from six to ten years should have about ten or eleven hours of sleep in the twenty-four, and from ten to sixteen years the amount of sleep should be about nine hours. Every child should sleep alone (as far as this is possible) in a quiet, well-ventilated room. He should go to bed at such an hour as will make it possible for him to secure sufficient sleep and awaken naturally early enough to get to school on time without undue haste or the neglect of any duty he should perform before leaving home. The more outdoor life a child has the better he will sleep usually. On the other hand, a heavy meal in the evening, the use of tea or coffee, much home study in the evening, obstructed breathing, earache, toothache and similar conditions are apt to interfere with the child's sleep.

If a sleeping porch is not available the windows in the room should be open so that the child may have plenty of fresh air. He may be protected from drafts by the use of screens, and from cold by soft light covers and hot water bottles, when necessary. During the day living rooms and schoolrooms should be flushed several times with fresh air for a few minutes at a time by opening the windows.

A child's clothing should be such as to prevent any part of his body from chilling, but at the same time should not be so heavy as to cause him to perspire on light exertion. The habitual use of too heavy clothing predisposes to "colds," while too thin clothing causes a heavy drain on the child's vitality. To attempt to harden a child by undue exposure is not wise. In

winter long stockings should be worn, and the feet should be protected from wetting by rubbers.

The feeding of children is of the greatest importance, and apart from the quantity and quality of the food the time and manner of the meal should receive much consideration. Regularity of feeding should not cease when the child is weaned. Teach him to expect his meals at regular hours, and his appetite and digestion readily adapt themselves to a schedule that is strictly adhered to. Let the meals be cheerful, social occasions. The food is more easily digested when eaten in a happy atmosphere than when consumed in gloom or acrimonious argument.

The question of recreation for a schoolboy or girl is sometimes a difficult problem. Outdoor play and sports are ideal, but the "movies" and similar entertainments have a strong appeal. A child attending school should not go to evening entertainments of any kind on any evening except Friday or Saturday and the child should not keep late hours then or go habitually. This applies to children in the upper grades. Younger children's entertainments should be very infrequent, and never in the evening.

### Open-air Classrooms.

Open-air classes were originally intended for tuberculous children, tubercular convalescents and the pre-tubercular. It was felt that their physical condition should not interfere with their education nor their education aggravate or intensify their physical disability. Hence open-air classes were established in order that these children might be educated under conditions favoring their recovery. The work was then extended to include anemic, delicate and "run-down" children, and has included normal children. Indeed, some of the best private schools in the country conduct all their lower classes in open-air rooms.

Whether these are called "real open-air rooms" or "open-window rooms," the principles upon which they are conducted, the methods and the results are much the same. A well-lighted, well-ventilated room is available to allow the room to be properly called an open-air room.

Excellent work may be done in an open-air class located on the roof of a building, on a sheltered balcony, in a tent or shack, or in a regular classroom with all the windows removed from the frames. There must, of course, always be a roof or some kind of covering to prevent rain from falling into the room, and there should be some kind of wall or screen to serve as a wind-break.

In some cities the new school buildings are equipped with one or more open-air classrooms. Sometimes large hinged windows, reaching almost from the floor to the ceiling, occupy one or more sides of the room. Such rooms can be immediately converted into open-air rooms.

For the complete success of open-air classes it is essential that warm clothing and good food be looked upon as necessary adjuncts to the fresh air. If the child is allowed to become chilled, the good effects of the fresh air will be nullified. A warm outer wrap and covering for the head, felt boots or other protection for the feet, a sitting bag, blanket and any other covering needed for the study or rest period (sometimes spent in lying or sleeping on cots) must be provided for each child.

Food furnishes fuel for the body and hence is a source of heat. Children in open-air classes need extra food for this reason, as well as to help in their upbuilding. Hot, simple, nourishing warm foods should be supplied.

The teacher of an open-air class should be particularly well qualified for her work. She should know something of food values and the general hygienic requirements of children. If she has, in addition, an instinct for social service, her value will be all the greater. An open-air class furnishes a splendid opportunity for the formation of invaluable health habits.

In almost all cases the results of open-air classes have been very good. The children usually gain in weight more rapidly than the average, the appetite improves, nervousness decreases and the blood tenses on a much redder hue. The pupils generally are more alert and interested, sometimes

**When your grocer sells you a package of Red Rose Tea (Crimson Label) at 30 cents he makes a little less profit than if he sold you a package of cheaper tea. The extra price is all in the quality.**

advancing more rapidly in their grade than other children.

To the more or less family or community spirit developed in an open-air class the children respond with helpful co-operation.

(The End.)

## Seven Tractor Reasons.

There are many advantages in the use of a farm tractor.

1. It does work when it should be done.
2. The tractor only consumes when it does work.
3. The number of tears may be reduced.
4. One man handles more horsepower.
5. It will do belt work; saves man labor.
6. It will work any length of time on the hottest day.
7. Tractors are adapted in size to any sized farm, etc.

The great disadvantage in the use of the tractor is the lack of competent operators.

## Convenient Sanding Block.

It is impossible to use a piece of sandpaper efficiently with the hand, or to use it in connection with a block and attempt to keep it in place by hand. Shop workers will therefore welcome the sanding block suggested. A slot is simply chiseled out in an ordinary block of convenient size and a strip of lath or wood is fitted into it. Sandpaper is then wrapped about the block with the free ends extending into the slot and the strip is screwed in place in the slot. This will draw the paper taut and a perfect sanding block will be the result. The sandpaper can be changed when necessary. For sandpapering floors, a handle may be hinged to such a block.

## Dwarf Apple Trees.

Dwarf apples are O.K. for the man who wants fruit in a hurry. But the trees are more expensive and more trees are needed to the acre. The yield per tree is less than for standard trees, but the acre yield is not so much reduced as you might expect. If dwarf trees are set too low, the scions will throw out roots, and the trees will no longer be dwarfs. You have to keep their roots cut off. The best proposition is to use dwarf trees for fillers, to bear before the standard trees are old enough. The dwarfs have to be cut out when the other trees begin to crowd them. The man with a small acreage can well afford to buy dwarfs. I have seen several good-paying orchards.

Success is made, not by lying awake at night, but by keeping awake in the daytime.

## Poultry

A cellar is usually considered the best location for an incubator. But any vacant room will be satisfactory if it has some ventilation and the family will co-operate by walking quietly about the house and not banging doors. Incubator thermometers often require so much observation that it takes many trips down the cellar stairs to keep the machine regulated. Many poultrymen and women have avoided that work and brought out good hatches by running the incubator in the kitchen.

Of course, an incubator cannot be located near a stove as the temperature of the outside air will have a direct influence on the air in the machine. In some homes when an incubator has been in the kitchen they have discontinued using the kitchen stove for three weeks and used an oil stove for cooking. Then the house is heated by a furnace or stoves in another room and it is possible to keep the kitchen heat uniform enough so that the incubator can be fairly well regulated.

Buyers of hatching egg boxes can save money by purchasing them in quantities and ordering early so shipment can be by freight. Nothing is gained trying to ship hatching eggs without proper packages. It takes too much time to make home-made packages and the breakage will be large if they are made wrong. One setting of eggs sells for enough to buy about a dozen or more packages and it takes only a few minutes to pack and address a commercial container.

Never try to hatch eggs that have been chilled. It is a waste of eggs and time. When saving eggs for hatching they must be gathered frequently and stored where they will not be too cold nor too hot. A temperature of about fifty degrees Fahrenheit seems the most satisfactory. Even then eggs for hatching should be stored no longer than necessary as the fresher the eggs the better they are apt to hatch.

Seeding 135 acres of flax in one day is quite a record. This is claimed by an Ontario farmer, who used a light tractor pulling two twelve-foot double-disk drills.

Winter is the time when the tractor can best be spared for a couple of weeks for a thorough overhauling. Before overhauling a tractor, a systematic outline should be secured from the factory, if it is not contained in the instruction book. Such an outline will simplify the work and insure every part receiving the proper attention.

## JACK'S HEIFER

It surely was hard, writes a correspondent, that Jack's heifer should be killed, too, when the railway had paid us so small a part of the value of all the other stock that it had killed before. In the spring we had lost a handsome colt that had seemed certain to grow into a handsome horse. Forty dollars was all the railway gave us for the colt, and while our claim was pending it had killed a promising young cow. But all other losses were as nothing compared with the loss of Jack's heifer.

Poor little Jack, his grief was pitiful. I thought and thought about the matter. At last, more because I wanted to give the children something to do than because I expected any favorable result, I told them to go down to the hawthorn tree and write to the president of the railway; perhaps he would see that Jack got something like the value of the dead heifer. So off they went, Fannie taking the paper and the pencil, Helen silent and sorrowful, and little Bob, scarry underfoot, standing what it all meant, walking beside Jack. That was election day in town, and we were all so busy that I forgot about the letter. I was startled, therefore, when the children said that they had written and mailed it. They showed me a copy of it. It read: "Dear Mr. President. Won't you please make the railway pay me for my cow that the train has just killed? Oh, but she was a beauty, and I wouldn't have taken a thousand dollars for her. This was how I got her. When I was a little boy I had \$2.50 that I had earned one way and another; so I bought a pig with it; she was a daisy, too. She would eat anything you'd give her, for we tried her on everything--even on burnt ginger cake. When she got to be well grown, what do you think she did? She went and ate up a whole flock of little turkeys and was about to begin on the old hen; but father caught her at it and said she must surely die. It was just about hog-killing time; so he gave me \$15.00. I forgot to say she had some little pigs of her own. Anyway, they killed her. When I got my \$15.00--oh, but I forgot; I never got it in money, for father said I had better have some more stock. So he gave me the nicest heifer you ever laid your eyes on. She was a real Jersey, and we called her Step-and-fetch-it, because she could step round so lively. We children fed her every day till she was as fat as butter. So after a while she got to be most a cow, and the railway ran over her. Now, Mr. President, please excuse this long letter. And, Mr. President, won't you make your railway pay me for my cow? My father's name is John C. Case."

Your affectionate friend,  
"Jack C. Case."

"P.S. We children all saw it. She jumped up in the air at least twenty feet, and when she came down she was dead. We saved her horns."

"What a letter to send to the president of a railway!" I thought with a gasp. I did not tell my husband. What was the use? We should probably never hear of it again.

But two weeks afterwards we stopped at the post office on the way to prayer meeting and got one letter that so aroused my husband's curiosity that he felt obliged to open it on the church steps.

"What does this mean?" he asked. I picked up from the steps a slip of paper that he had dropped, and my husband read part of the letter aloud: "Dear Mr. Case. In consequence of a very interesting letter received from your son and read at a meeting of the board, we have decided to pay you a larger sum than is customary for the loss of your Jersey heifer."

The slip of paper that I had picked up was a cheque for \$75.00 payable to our Jack!

**Yellow Corn Better Than White For Feeding.**  
Yes, it is a settled fact that yellow corn, or red corn, or white corn, which carries a large amount of the yellow coloring matter in the kernel is, from the nutritional standpoint, superior to corns that do not carry the yellow pigment. It appears that the fat soluble vitamins, which is so essential to the life and well-being of man and of rats, guinea-pigs, mice, rabbits, chickens, pigs, and presumably other forms of livestock, such as sheep, cattle and horses is associated in some manner and in some feeds with the yellow color. Yellow sweet potatoes contain considerable of this essential vitamin. So does yellow butter, wherein it was first discovered.

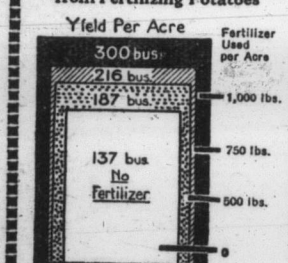
I never knew a man in my life who could not bear another's misfortune perfectly like a Christian.--Pope.

How about the herd boy? Get him out in a good-sized yard, away from the rest of the herd. Remember he is half of the breeding-power of the herd, and that his influence on the profits for the year amounts to more than that of any one sow.

These are just the days when the government bulletins are interesting. A man I know who is around among other farmers a good deal says he seldom sees a government bulletin in one of these homes. And yet, there are many bulletins, all full of good suggestions, to be had simply by writing to the Department of Agriculture, Ottawa. Write and ask for a list of government publications for farmers, and then make selections from the titles given.

## Here is What

Stanley Merrill, Lambeth, got from Fertilizing Potatoes



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