

Soils and Crops

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More Attention to Farm Forestry.

Aside from the income resulting from the sale of timber, the area devoted to the farm woodlot makes a substantial contribution to the success of the farm. It provides fuel, fence posts, materials for construction and repair, products of the sugar bush, and protection to crops, stock and buildings against weather extremes. The forest holds back flood waters, improves and builds up the soil and adds greatly to the attractiveness of rural scenery.

The rapidly increasing attention that is now being given to this department of the farm is due very largely to the much higher prices recently paid for forest products. Timber is a national necessity. The country was suddenly awakened during the war to its defenseless position should our wood supply be exhausted. The increased demand occasioned by the gradual growth of peaceful pursuits as well as by military needs and the gradual reduction of available stocks have been responsible for the flight in lumber quotations. That value will be maintained on a correspondingly higher level in years to come than during the past can hardly be questioned owing to this relation of supply and demand.

The farmer should make his woodlot permanently profitable. When the lesson that all departments of the farm should contribute a reasonable share to the operator's income is generally understood and practiced, the farmer will see to it that land unsuited for cultivated crops will be devoted to the growing of timber. Through the production of a greater abundance of trees of superior quality by protecting them from fire, thinning where too crowded and planting where too thin, the farmer's income will be enhanced. The farm management problem will be partly solved in that he will be better able to employ his men and teams during the cold months. The attempt to combine stock raising and forestry will be abandoned by the thoughtful farmer, who will rather strive to keep the floor of his woodlot free from grass through encouraging the growth of a dense undergrowth. He will come to realize that the quantity of products taken from this department of the farm will be doubled and tripled if he gives it the same consideration accorded other crops.

Perhaps no province in the Dominion offers more promising opportunities for the adoption of modern woodlot practices than does Ontario. The growth of her unsurpassed virgin forests proves the adaptability of her soils and climate. The wide variety of these soils provides for the production of wood to meet every human need. Here may be found extensive areas not well suited to the culture of other crops, that may well be devoted to forestry work. The best markets in the world are available and transportation lines and woodworking factories were built for marketing this particular class of products. Since general farming predominates, the

labor situation in rural districts could be generally improved by furnishing productive employment throughout the year. These and other inducements urge Ontario farmers to a more careful study of modern methods of producing and marketing their woodlot products.

How You Can Get Good Hatches.

It is easy to forget that hatching eggs are really living objects, and must be cared for as such. Most people are very careful with eggs under a sitting hen or in an incubator, but they will handle eggs, before starting incubation, with no other thought than "an egg is an egg," and that breaking them is the only way they can be harmed.

It is true, before the hatching egg is heated, that the germ in it is more hardy than after hatching has started. In this respect egg germs are like buds on a tree. Buds will stand a lot of cold weather changes during the winter when they are dormant, but after a little warm weather has awakened these buds, and they show signs of life, we know that a cold spell means disaster to them.

So it is with the germ in the hatching egg. It is dormant when laid, but a little heat will start it growing. Then it is very tender, and a changing temperature will either kill it or materially weaken it. A great many eggs get heated in the laying nest. An egg laid in the morning might be under different laying hens continually, until late afternoon. The heat from these hens would be enough to warm up the egg and start germ growth. This very tender germ may be seriously weakened or even killed before it reaches the incubator. It is therefore important to keep hatching eggs in an even temperature.

There is no more important factor in successful hatching than that of moisture. If you have ever operated an incubator you doubtless know this, and provide moisture when needed. But did you ever think of providing moisture before putting the eggs in the machines? The egg shell is just as porous before it is in the machine as afterward, and it will lose moisture just as quickly if we are not careful. Once the moisture has left the egg, it cannot be replaced, so that if this factor is not considered we start off with an egg much too dry for best hatches.

Warm, circulating air is more thirsty than cool, moist air, and will absorb water from an egg ever so much more quickly. So when hatching eggs are to be held for a day or more they should be placed in a cool, damp place. The cellar is often the best place, and the kitchen the worst.

If you will gather your hatching eggs often, if you will keep them from getting heated enough to start germ development, and will place them in a place which is neither too warm nor too dry, you will get good results. In doing this you eliminate two factors—heat and drying, which spoil more hatching eggs than anything else.

Dominion Department of Agriculture.

The Report of the Minister of Agriculture at Ottawa, for the year ending March 31st, 1920, makes reference to a conference of representatives of Federal and Provincial Departments at which an agreement was reached which will, to a large extent, eliminate overlapping and allow for close co-operation in the various lines of work carried on. Production, it was agreed, is to be carried on through provincial activities, while marketing and experimental work are to be cared for by the Dominion Department, except where special arrangements to the contrary are deemed wise. The Report of the Minister covers, in addition, the

work of the Department carried on through the year by the various branches: Dairy and Cold Storage, Seed, Live Stock, Health of Animals, Fruit, Entomological, Publications, International Institute, and Experimental Farms. Among the new activities reported are the record of performance for poultry and special relief policy of the Live Stock Branch, with relation to the supplying of feed to unfortunate districts in the Prairie Provinces. The Report is distributed by the Publications Branch, which is shown to have sent out, during the year, two and a half million copies of publications.

A dollar saved is a dollar earned. But be sure it is real saving.

Some goods pay more profit than others. Usually, the poorer the quality the greater the profit.

The grocer pays more for Red Rose than for other teas—and he sells it at a less profit.

When you buy Red Rose you buy the best.

Poultry

Sort over the vegetables and estimate the amount needed for home use. All that can be spared will prove fine green feed for the hens and help to keep the breeding stock in vigorous condition until they can use the range every day. Mangels are cheap, but sprouted oats are good health producers but possibly they are not relished by the hens as much as oat sprouts.

Dry mash hoppers can be made by sketching the side view of a hopper on the side of a packing box. Then saw out the hopper and use the boards removed to close up the front and top. Use a small cleat in the front of the hopper as a lip to keep the birds from drawing out the mash with their bills. A piece of wide-meshed poultry wire stretched across the opening will enable the hens to eat, but prevent wasting of the mash. Open receptacles for serving dry mash do not work well according to our experience, as the hens frequently scratch in them.

When it is snowing and blowing it is much satisfaction to know that the hens have hoppers of dry mash serving them cafeteria fashion, with the balanced ration which is as near as possible to ideal for egg production. Of course this is not exactly like the hens frequenting the range, but it does help to keep hens thrifty and makes them lay.

Blackcap Raspberries.

In my experience the blackcap will thrive best on rather rich clay loam that is naturally well drained. Unless the soil is already sufficiently rich, stable manure, if available, should be applied broadcast at the rate of ten to twenty tons to the acre, and turned under, plowing deeply. If stable manure is not available complete fertilizer containing 4.5 per cent. nitrogen, 7.7 per cent. phosphoric acid (available), and six per cent. potash, applied broadcast after plowing, and worked into the soil with cultivator or disk harrow will give equally as good results. Good preparation of the soil must not be overlooked. Clods should be broken up and the ground put in the best possible mechanical condition before planting.

The distance at which blackcaps are usually set in commercial plantations is three feet apart in rows, which are seven or eight feet apart. The most economical way of planting raspberries is to lay off the rows with a turning plow, about four inches deep. The plants then can be laid along the row at the proper distance apart, the roots spread out, and the soil pulled in over them with a hoe or small steel rake, and the job finished by turning the soil thrown out with the furrow back over the roots of the plants with a one-horse turning plow. Clean cultivation is necessary, as the raspberries and weeds cannot thrive together. Therefore, the berries will give way and weeds take full possession, unless they are kept under control by good, clean cultivation.

The black raspberry requires care in its pruning, which must be done at two seasons of the year to get the best results. The young stalks that grow from the roots in the spring should be stopped by pinching out the tip when they reach a height of about twenty inches. This work will necessitate going over the patch several times, in order to stop the canes when they have reached the proper height. This stopping or pinching back the canes will induce the development of

numerous lateral or side branches, and for this is not alone a woman's problem) prepare themselves in advance so they are ready when a question comes, no matter what the age of the child. There is no excuse for ignorance now on the part of parents as there was ten years ago, for in the last few years the country has been flooded with literature which is to be found in the bookstores and public libraries or furnished free on application to the Provincial Board of Health.

The parent who neglects to be ready to answer the questions that are bound to come may rest assured that the child will obtain his information from other more or less reliable sources, and influence the entire future of the child.

In his progress through childhood the child comes in contact with many agencies, such as the schools, churches, press and various other organizations. Through these he obtains much accurate knowledge bearing upon sex hygiene, but what effect this information has upon him, whether it is wholesome or otherwise, depends upon the early attitude of his parents. If they are ignorant, careless or prudish and cloak the subject with mystery, a morbid curiosity probably will be aroused, but if the subject is handled with frankness and reverence a very little information serves to satisfy the child and start him on his road to normal and healthful adolescence.

Canada's Maple Products.

The manufacture of sugar and syrup from the sap of the sugar maple is an important farm industry in the Eastern provinces of Canada, and particularly in Quebec. Long before the white man settled the country, maple syrup was known to the aborigines, and apart from wild honey was the only intensely sweet product at their command. The methods of procuring it were naturally of a very crude description. Modern methods have greatly improved the product and have led to an ever-increasing demand. Quebec province is the centre of the industry. Of the 20,000,000 pounds, or thereabouts, produced annually in Canada, more than two-thirds have to be credited to Quebec. Ontario is officially known to the aborigines for five million pounds, and the Maritime Provinces for half a million pounds only. The other provinces of Canada do not figure in the calculations. These facts are gathered from a timely pamphlet just issued by the Department of Agriculture at Ottawa, of which J. B. Spencer, Director of Publicity, is the author. From this well illustrated and technically detailed publication it is also learned that the production of maple sugar, and its equivalent in syrups, of late years has shown a tendency to decrease. From 1851 to 1881 we are told the average yearly production was about 13,500,000 pounds, from 1881 to 1891 about 17,500,000 pounds, from 1891 to 1901, 19,000,000 pounds, and from 1901 to 1911, 22,500,000 pounds. The latter was the pinnacle of annual production, for in the next decade the average per year was 21,200,000 pounds, and in later years the average has been little less than 20,000,000 pounds. It is enough, that perhaps with the increase in price that has taken place recently greater production may be looked for. It is estimated that the value of the yearly manufacture of sugar and syrup is \$2,000,000, and that 50,000 people are employed in the industry at the height of the season, which is of very short duration, extending over only five or six weeks at the most. Stringent laws against the adulteration of the product have been passed, especially in Quebec, where school children have been instructed in the use of the Pure Maple Sugar and Syrup Co-operative Agricultural Association has been organized.

Large vs. Small Tractors.

The farmer of the future must be a mechanic rather than a day laborer, remarks D. D. Gray, Superintendent of the Central Experimental Farm at Ottawa in the December number of the Agricultural Gazette of Canada. This, of course, must not be taken in a literal sense, but rather as suggesting that the future agriculturist must combine with a multitude of other things he requires to know, a greater knowledge of mechanics than he has formerly had. Accepting this suggestion as his, Mr. Gray tells of records that have been kept at the Central Farm on the cost of operating three makes of tractors. The cost of operating the smaller tractor is shown to be greater than the cost of operating the larger, that is in regard to horse-power. The cost of discing with the smaller is shown to be less, due to greater speed possible than with the larger. The cost of plowing with the smaller is more than with the larger. The lighter machine burned gasoline at a cost of 45 cents per gallon and the heavier machine kerosene at 28½ cents per gallon. Cylinder oil cost 85 cents per gallon. Living is the best preaching.

The Growing Child—Article VII.

Sex Education.

The question of sex education is one that troubles the majority of thinking parents. There comes a time in the life of every child when he awakens to a realization that life must have a beginning, and he probably runs to his mother with a question.

Fortunate, indeed, is the mother who is prepared to answer the first question and so provide the foundation for confidence between mother and child. If the question is ignored or is answered untruthfully, an irreparable injury has been done to the child.

The wise mother (and fathers, also, for this is not alone a woman's problem) prepare themselves in advance so they are ready when a question comes, no matter what the age of the child. There is no excuse for ignorance now on the part of parents as there was ten years ago, for in the last few years the country has been flooded with literature which is to be found in the bookstores and public libraries or furnished free on application to the Provincial Board of Health.

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Inaugurating a School Lunch Service.

Many children attend school breakfastless. Some because of capricious appetite and in other cases because food is not to be had in sufficient quantity. Furthermore, in rural districts, and in some cities, a number of children live such a distance from the school as to make it necessary for them to carry lunch. Quite frequently the lunch is insufficient in quantity and of limited nutritive value. For these reasons large numbers of children during the most important period of their growth and development have practically but one meal a day throughout the school year. The education and health authorities have been coming alive to this neglect and are attempting to overcome it by providing for school lunches.

School lunches are no longer in the experimental stage. Wherever tried they have been successful, and the benefits of school feeding are generally recognized. A growing child needs more nourishment in proportion to its size than does an adult, and this is as true for the rich child as for the poor. Hence, it is just as much an advantage for the child of well-to-do parents to be provided with nourishing food at school, since he cannot go home to get it, as it is for the child of the poor. This at once removes the matter of school feeding from a class or charitable affair into the realm of child hygiene, where it properly belongs. Of course, there will always be some children who cannot afford to pay for this extra food and must be fed at the expense of some one else, but this can usually be arranged. In nearly all of the newer school buildings in the cities and towns of France the kitchen is as much a regular part of the plant as the classroom.

There are very few schools where a lunch service cannot be established if attempted in the right way. The success of the undertaking depends largely upon the interest, enthusiasm and knowledge of the teacher. When she decides that the service should be inaugurated in her school, the question of financial support comes first to mind. The movement leads the way. Do not let him be chilled in the school superintendent and Board of

Education, as the school lunch is rapidly being recognized as a part of the regular school work; but they are not always ready to finance the purchase of equipment and other initial expenses. In the large cities, committees of public-spirited citizens sometimes do this, or Parent-Teacher Associations, Women's Clubs, or similar organizations give financial support. In some large school systems the work is directed by a trained dietitian, with capable, paid assistants. The gain in weight of undernourished children, the training in refined social habits, hygienic living, co-operation, and community spirit will probably well repay all efforts expended.

Morning Inspection.

In the daily life of every child there are certain things so important from the standpoint of health that every mother should assure herself of their observance by diligent observation and inquiry. The best time for this inspection is in the morning before the child starts for school. Make the hour early enough to allow the child time to attend to any point which he has forgotten or neglected. Children are very apt to forget things which are not habitual and this inspection should be continued until correct health habits are an integral part of the child's daily life.

Notice first the cleanliness of the skin, as every mother will because of its bearing on her pride in her child's appearance and self-respect. But apart from the question of ordinary decency, cleanliness of the skin has its bearing on the question of health. If the skin is kept clean and in a tonic condition by frequent bathing, it will relieve the kidneys of much work that would otherwise fall upon them.

After satisfying yourself that the child's bathing has been properly attended to, learn if he has eaten any breakfast, and investigations made in several large cities revealed a startling number of children who go to school without any breakfast or a very unsatisfactory one. No wonder that malnutrition is so prevalent. It is a well known fact that many children have little appetite for breakfast, but when the demands that mental and physical growth make upon a child in school are realized every effort will be made to induce the child to take some food before leaving home in the morning. Though the establishment of school lunches should be a part of every system of school hygiene, this fact does not relieve the home of its responsibility.

Have the child's teeth been carefully brushed after breakfast? Since the relation of defective teeth to disease has been recognized, widespread attention has been paid to the care of children's teeth. When particles of food are left around the teeth the ever-present bacteria bring about fermentation and putrefaction, acids are set free which attack the enamel and decay begins. Hence, the importance of cleaning the teeth is plainly seen, and an alkaline mouth wash, such as milk of magnesia, lime water, or salt and water, should be used. Children should be taught to thoroughly masticate their food.

Has the child been to the toilet? Constipation is one of the most troublesome and common complaints of both children and adults, and nothing is more conducive to this condition than neglect of regular evacuation of the bowels. Training in regular habits should be begun in infancy, and as the child grows older he should never be allowed to neglect this hygienic duty. He will frequently be in such a hurry to run out to play or to be off to school that he will be careless in the matter if he is not carefully supervised.

Notice his posture, remembering the important relation this bears to his general health and self-respect. Does he stand erect with a free, easy carriage? Is his head well-poised, and his shoulders straight and lying close to the ribs behind? Does he walk toward you with a firm, erect attitude, or does he slouch along with a stooping body and drooping head? If these things are not as they should be, an investigation should be made of the physical training at his school. Finally, see that he is properly clothed. Many children wear too few or too many clothes as the whim seizes them, or as some playmate leads the way. Do not let him be chilled in the winter or overheated in summer.

are saying about you.

Only a boy—and yet, to-morrow you may look for him in the very front rank of the world's activities. Even now, he is turning over in his mind plans for a bigger and better farm than his father or his grandfather ever owned.

What are you doing to help that boy? Are you living the best life you can, clean, honest and above-board? Are you giving him a name and a character that will live, or will you be satisfied to leave him \$1,000 and think that enough?

To-morrow you will be leaning on this boy of yours. Are you making him strong against that day?

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THE REASON

Jane was tardy at breakfast, not because she cared especially about sleeping late, but because her family insisted that a school-teacher on her summer vacation ought to sleep late. As she sat down in her cool, loose blue smock she noticed the contrast between herself and her sister Frances, who, neat and trim, all ready for her day at the office, sat opposite her.

"Have a roll, Jane?" asked her father. "Now that you are at home you must eat and get these rosy cheeks back again."

"Don't worry about me," said Jane smiling. "I'm so glad you are here at last, dear," said Frances. "I couldn't bear to think of you away up there in that little school among the horrid coal mines. And we have always had such good times together here."

"It feels perfectly wonderful to be at home," declared Jane. "Oh, by the way, sis," said Rodney, "I saw Martin on the street yesterday, and he wanted to know if you were coming back to the Chronicle this summer. He says he wants to make it permanent. He said you could be society editor by the first of the year."

"Oh, no, Rodney," said Jane mildly. "You know I made my decision last summer. I am a teacher, not a newspaper woman."

"Jane!" cried Frances sharply. "How can you talk so? You can change your mind. And such a splendid offer! Why, before I'd go back to wear myself out in that tiresome hole in the woods for the sake of a hundred wild youngsters I'd—"

"It does seem as if the newspaper work were not so tiring," said mother gently.

"Of course newspaper work is no end more lively," said Rodney. "It is better paid; there's one thing to be said for it," said father. "Oh, but every consideration is against teaching," Frances urged her. "Teaching is just burying yourself, wearing yourself out before your time. You are never appreciated—"

Frances was interrupted by a sharp ring at the doorbell. "Postman," said Rodney. "I'll go." He returned presently with a handful of letters.

"One for Jane from her northern town," he announced. "What queer writing!" Jane tore it open and read it. At the end she looked up with a little inarticulate noise that was neither a sob nor a laugh, but a combination of both.

"I wish you people would read this," she said breathlessly. "It's the reason—one of the reasons—why I have to go back to my high school. Herbert is a little fellow in the junior high; he just escaped being sent to reform school the year before I went up there. We got to be pretty good friends, and while he was sick in the spring he wanted to do something for me, so he gave up smoking. I thought he never had smoked since then, but—well, read it."

She passed the disreputable-looking little letter to her father, who slowly read it aloud:

"Dear Teacher. I thought I would write you a few lines because I have something to tell you. You know that last night at the party you asked me if I had ever smoked again since I promised not to, and I said no, I am. It was a lie, because I had. No one ever spoke as kind words to me as you have, and you are the only one I ever gave my word to; and then I only kept it a month, and I think that is what made me feel so mean the last few weeks of school. That is why I never came to tell you good-bye. Please forgive me, and I will try harder, not to smoke. O Miss Harrison, if you only knew how sorry I am! I can see the smile on your kind face yet. Hoping to hear from you soon, I am, Yours truly, Herbert Macchali."

As Jane's father laid the blotted little letter gently upon the tablecloth no one spoke. Mother was wiping her eyes.

"Plucky little chap!" muttered Rodney. Jane smiled suddenly, radiantly. "Dear people, don't you see why I have to go back?"

"Yes, I see! I see, Jane!" cried Frances, springing up to kiss her. "You blessed old man!"

Courtesy.

How sweet and gracious even in common speech is that fine sense which men call courtesy! It transmutates aliens into trusting friends. And gives its owner passport round the world.

How often do you visit the school your child attends?

It is easier to stay out than to get out.—Mark Twain.

No matter how bright a dollar may be, put it into a good savings bank, and it will soon have more cents.

Ventilate your farm buildings. Air once breathed is as harmful to animals when breathed a second time, as it is to human beings.

So long as you have brains enough not to fall out with your neighbor over politics or religion, you will probably get by if you are willing to work.

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