

Soils and Crops

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.

Saving the Grain.
Our Government estimates that the farmer loses three per cent. of his grain each year through careless threshing methods, and very often it is the farmer himself who is most to blame. Anxious to speed up a wearisome but very necessary job, he forgets that the big idea is to get as much grain as possible instead of getting the work done in the shortest time.

While the causes of waste are comparatively few, every precaution should be taken for its prevention. Grain threshed when it is tough and damp is sure to represent a loss. It is impossible for the separator to remove all the kernels, and an unbelievable amount of grain goes over with the straw. The value of the time lost in waiting for the bundles to dry will be more than made up by the saving in grain.

A competent separator man will keep his machine adjusted and running at the proper speed, but he often becomes careless and thinks more about the number of bushels going into the feeder than of how much grain gets to the bin. From long association many farmers understand threshing machinery well enough to find out for themselves if everything is working properly, and should not neglect to see that adjustments are made whenever needed.

Where the portable elevator is used the waste in transferring grain from wagon to bin is very slight. However, not every farm is so equipped. Shovel grain is hardly child's play, and the best of circumstances and if the man with the scoop is compelled to reach a high door or work in a cramped position, not all the grain will reach its intended destination. A blanket on the ground and one from the grain door to the wagon will save considerable.

Careless and fast pitching into the machine is another cause of waste. On a neighborhood run, where help is traded back and forth instead of having a hired crew, more care is taken, as all the men are farmers and remember that their own turn will be next. But even your best neighbors get in a hurry at times, especially if they happen to be on the tail end of the run and it looks like rain. A separator will not stand crowding. The machine is set at what is considered a fair pitching speed, and at that speed is supposed to handle the grain properly. Overcrowding cuts

down the speed, which means a proportionate loss in efficiency, with the result that much grain is carried over into the stack.

Who Runs Your Farm?

"The government runs my farm, and I am quite willing to let them do so." Thus spoke a farmer whose financial credit balance is represented by six figures. He has made a practice of reading and adopting the results of the government's experience on the experimental farms, both Dominion and provincial, and has been rewarded handsomely.

This farmer was instrumental in forming a farmers' club in his neighborhood and securing lectures by the travelling representatives of government agricultural departments. He took advantage of these by adopting the good points from each. A government report advocated the installation of lightning rods on farm buildings. He put them on his buildings and advised his neighbors to do likewise. Some of them followed his lead; others ridiculed the idea, one of whom lost his buildings the following season by lightning. Neither was he too proud to make arrangements with the town store and livery to supply theft with straw free that he might haul away the manure from their stables, and thus keep his land up to the highest producing point. He did not consider it too much trouble to clean his seed that he could demand \$1.50 per bushel for his oats as seed, while his neighbor was getting but 65 cents.

Farming means production, just as truly as does manufacturing. The farmer, however, has an advantage over the manufacturer in that the latter must make his own experiments; he must pay for his experience. If the results of his experiments are satisfactory, they may produce financial returns fully warranting the outlay. If they are unsatisfactory, the expenditure upon the investigation is lost, and, in many cases, means ruin.

How different is the farmer's position! Canada is making the experiments for the farmer, Canadians—the manufacturer, the mechanic, and every resident of Canada—are paying the cost of securing the experience by which the agriculturist may, personally, be the gainer.

It is only too true, however, many of our farmers neglect to profit by the help thus provided. Innumerable bulletins are left unread, and the information they contain is not utilized.

Poultry

Feed, care and cleanliness this month and next are all important. If any important item is overlooked now that neglect will show in the results next winter, also next spring and summer.

All young stock should now be sorted and culled. Besides those showing very undesirable color and shape defects and serious disqualifications, it is important that any and all slow growing and slow feathering chicks be culled and sent to market. Never breed or attempt to get eggs from such stock. Youngsters showing leg weakness, twisted wing feathers or any inclination whatever to lack of vitality should be sorted out and sent to market as soon as possible.

Standard size and shape, which are obtained through strength, vigor, proper housing, feed and care, are necessary to success. Even strictly egg farmers must select and breed to a standard for size and shape. Pure bred fowls unless carefully culled will degenerate, showing different characteristics, different sizes, shapes, etc., and as a class difficult to handle in large flocks, to house and feed them to insure uniform conditions. There are other reasons also why the young stock should now be culled, thus permitting more house and range room for the more desirable during the autumn months.

Green food in some form, as well as sour milk or buttermilk, should be supplied to both the old and young stock if possible. A good grade of meat meal, beef or fish scraps should also be supplied. These foods will develop better youngsters and will insure the adult stock being in far better condition this winter.

Training to Stand

There is no one thing that shows the amateur quite as much as to bring animals into the ring that are not actually broken to lead. The show animal ought to be taught to lead right up beside the master and not have to be pulled and hauled and tugged. Animals being shown for the first time should be previously led about so that they are accustomed to the noise of automobiles, shouting, etc. In teaching an animal to walk up beside the master, a long buggy whip held around behind one's back will be found quite useful. It is not necessary to mistreat the animal to teach him to lead. Most animals are easily taught if approached in a sensible sort of way.

In dealing with bulls they should, of course, be sufficiently handled so that they are tractable, but the only safe bull is a dead bull and most farmers make it a misdemeanor to bring a bull into the ring without a staff. In one thing to remember about handling bulls with a staff is to keep their heads up. As soon as a bull can get his head down, he can use the huge muscles of his neck, but as long as his head is kept up, he can be handled with considerable ease.

Animals intended for show should be started on feed at once. Showing has always been accounted a means of advertising and it has never been looked upon as a money-making scheme. The young breeder should by all means show at least at his local fairs since a man usually gets his first and often his best advertising right in the home community. There is no "hocus pocus" about showing animals despite the fact that once in a great while a judge can be deceived into putting an inferior animal ahead of a good one. Animals with good individuality, well-fed, well-taught, well-bred and with all exterior appearances in first-rate form cannot help but be a credit to the breeder, even though they do not stand in first place.

Be Cheerful.

It doesn't help the boys out there to whimper that the foe is strong. It doesn't lift their load of care. To wall that things are going wrong. It doesn't keep their spirits high. For us to sit at home and sigh and prophesy in manner grim that grim disaster's sure to come.

Keep cheerful! though the task is hard and hopeful though the days are grim. Our own morale we now must guard, we must have faith when hope is dim. Though hearts grow heavy now and bleed, This be our cry: "We shall succeed!" And though disasters round us fall, Let's be courageous through them all.

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MOTHER-WISDOM

All Day Long the Happy Farm Child Learns by Doing.

By Helen Johnson Keyes.

Education has a new slogan: "Learn by doing."

That is a way in which farm children always have received much of their education though neither they nor their parents nor their teachers have been in the habit of calling it education. Education has been considered something learned out of very dull books and the "higher" it has been the less practical use it has had.

All this is changing and something very odd is happening at the same time.

You remember that when our little district school began to be not quite what we needed for our new farm life, we turned to the city schools and began to copy them. Soon we found they were not right either, at least not for our country children. So we developed a kind of school all our own, in which arithmetic is taught by working out farm problems, and English themes discuss the operations which occupy us day by day, and chemistry uses the kitchen and the soil for laboratories. The oddity is that suddenly this country idea has taken hold of the city, and the farm school at its best is being imitated in the most modern of the private city schools!

I do not mean that for their arithmetic city children are taught to calculate the shrinkage of hogs, nor to write themes about silos. That would be as absurd although no more so than were the old stock-exchange and banking problems formerly imposed on farm children and the compositions concerning the sewers of Paris. I mean that the principle of bringing knowledge into touch with life and of learning to do things which it is going to be our part in life to do, instead of only learning about things which have fallen to the share of other people to do, is making over the city schools as it has done the farm schools.

There are two very solid reasons for this; one of them is a business reason and the other a scientific one and each vital.

The business reason lies in the increasing difficulty and complexity of life. When you compare the business of farming to-day with the simple occupation which it was in our grandfathers' time, you will understand what I mean.

No one does anything more in a very small way. The whole world is tied together in a network and the threads of your business are knotted into the threads of other people's businesses so that you are obliged to take very good care of your own strand when you knot it into the net and do it very properly or else you will disturb the business of other people, who, in turn, will injure yours. Life having become so complicated, there is not much time left for mere thinking about things. Every man, woman and child must do things and do them well.

A new science has grown up in the last generation which consists of the study of the brain and nervous system. It has a very long name and very delicate and complicated instruments with which to make its discoveries. The truths the learned men establish through this new science, are taken up by educators and put to use in schools, and in this way many changes in methods of teaching have come about.

One of these discoveries is that our muscles play an important part in the growth of our minds. It has been found that those parts of the brain which are seated the centres which control our muscles lie round those

centres which make us think and that sometimes the centres for muscle control and for thinking are the same.

This scientific revelation must be a comfort to farm mothers. We have realized that our children ought to be taught to be good farmers and housekeepers but we have been afraid that if our schools filled up their time with "nature" and agriculture, manual training and domestic science our boys and girls would know nothing else.

Now we have been shown that, occupied with these studies while they are young, they are not only learning useful occupations but at the same time are developing their brains in the very best possible way so that they will be quick to understand the higher branches of learning at a more mature age.

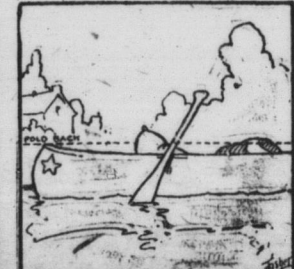
We know that only a small proportion of farm children continues through high school but the number is rapidly increasing. I believe that there is no stronger reason for this increase than the fact that more and more the elementary schools have been developing children's brains by teaching them through doing. The old dull way of committing to memory facts out of books is discarded in the schools of our more progressive regions and where it is discarded there are found the brightest, most ambitious children and the largest number going on into high school. As a result of mental development through muscular training they are full of energy and ambition when they leave the lower grades and they seize eagerly on the more cultural studies.

A great educator says that probably no city school can equal the good farm as an educator for the mind through the muscles. It offers a splendid variety of employments, demands accuracy and promptness, punishes forgetfulness, neglect and shirking and shows definite results from work done. This is easy to understand.

There are machines in use in some city schools which develop the same muscles which housework on the

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The Meaning of Tonics.

No medicines are used by those who do not consult a doctor for their ailments to such an extent as tonics.

Many of these preparations are not tonics as advertised but simply mixtures in which the principal ingredients are alcohol.

But alcohol is not a tonic, it stimulates at first and then depresses and is the worst kind of a habit-forming drug.

But it is of great value in certain conditions especially when it is necessary to produce heat quickly and stir up a fainting heart.

It cannot possibly be useful when taken for weeks and months in preparations in which it forms 50, 60, or 70 per cent.

Such preparations surely are not medicines in the proper sense of the term.

A tonic is a substance which helps the organs of the body to improve the quality of their work, the heart to beat more slowly and vigorously, the lungs to expand and contract more forcibly, the digestive apparatus to dispose of food more effectively, the brain to think more clearly and persistently.

Perhaps it will not do all these things directly, but if it does one of them successfully this may be followed by a successful action in other directions.

The pure air of the mountains or the forest is a tonic to the lungs, but it also brings more oxygen to the blood and hence means better blood in the digestive organs, heart, liver, brain, and kidneys.

Therefore pure air is one of the best and cheapest tonics to be had, available to almost everybody.

People need tonics sometimes because they really have some kind of disease, and sometimes merely because their machinery is slowing down and needs bracing up.

The tonic in the first instance may not cure the disease, the disease may be incurable and yet it may make the patient feel better for a while and perhaps enable him to do much useful work before he is permanently laid by.

farm does—one, for instance, which repeats the exercise of scrubbing at the washboard; another which calls into use the muscles which are exercised in mopping up a floor. In some of these schools no arithmetic is taught out of books till the fourth grade. Before that time it is learned indirectly through the measuring and collecting of materials for making and doing things. These operations are only what every child on a farm grows up with, sees every one round him do and does himself.

So you will see that the farm is serving as an example, a copy, for those elementary city schools which represent the most scientific ideas and educate toward the most scholarly professions. The basis of brain development is now known to be muscle training and the occupations of farm life, whether learned in school or at home, are being copied artificially in elementary city schools because great educators know them to be the very best means of producing active, efficient minds, capable of making the most of whatever higher culture or business opportunities life may offer.

Three cheers for the Canadian farm! It is the best place in all the world to raise great citizens.

Fence The Garden.

Fencing for the farm garden is undoubtedly a necessary investment unless all stock in the neighborhood is maintained under good control. It should be high enough and tight enough to keep out poultry. Some farmers fence their poultry and leave the garden unprotected. Others fence their garden and give the poultry the freedom of the farm. My observation leads me to believe that the farmers with the fenced gardens raise the most and the best vegetables. A confined hen will fly out on occasions but a hen with the freedom of the remainder of the earth will often condescend to remain out of a fenced garden.

In order to do their best, vegetables need a little rain at frequent intervals. Light showers coming often are more conducive to growth than a heavy rain followed by a long dry spell. Some market gardeners install watering systems and they find the investment an insurance against the dry periods which sometimes nearly ruin fine crops of vegetables. Doubtless the installation of systems for supplying water to farm homes will be following in some cases by an effort to irrigate the garden crops. This will prove an especially valuable asset if vegetable growing is to be depended upon for a part of the farm income.

Vegetable growing means hard work and a large amount of time expended on a small area. However, the effort to produce a fine variety of first-class truck for home use saves expense in keeping up the table and makes the farm a better place to live.

Many a woman has a fine carriage who never owned a horse.

Or it may be the means of putting the patient on his feet and making him well.

This is often seen in the use of tonics after severe sickness or surgical operations or any condition in which there has been great loss of blood.

Tonics are often needed after prolonged exertion which has exhausted the vitality, after intense heat or cold, and after prolonged confinement in an improperly heated and ventilated house or place of business.

The dull and listless feeling which comes in the spring is an indication for a tonic, and it is then that the highways and byways are alive with flaming advertisements of all sorts of patent medicines, presumably tonics, to deceive the unwary.

The tuberculous weakened by sweating, cough, loss of sleep, and absorption of poisonous material need tonics, and those should be selected which will help and not delude and disappoint them.

The anaemic, pale and weak from poverty of blood and impairment of functions require tonics and are often greatly benefited by them.

QUESTIONS AND ANSWERS.

M. V.—Please inform me as to the symptoms, cause and curability of pink eye. 2. What is your opinion of one who cannot look out from a great elevation without a desire to leap down, and who starts in her sleep when such a situation is brought before her?

Answer—1—This disease is otherwise known as contagious conjunctivitis, being an infectious condition of the mucous membrane which covers the eyes. Its principal symptoms are swelling, redness, soreness and a free discharge from the eye. This discharge must be removed with great care very frequently, and a solution of boric acid instilled into each eye, as often as the discharge is removed. It usually gets well in the course of a week or ten days. 2—I should say that such a person should keep away from high places and avoid every opportunity for carrying out the desire to jump.

The Dairy

Cleaning Milking Machines.

Placing the rubber tubes and test cups of a milking machine in an antiseptic solution while not in use will keep them clean with very little trouble. Salt water is often used, and whatever solution is used should contain salt because of its preservative effect on rubber.

Salt water alone is not very effective in keeping the tubes and test cups sanitary. The addition of a small amount of chloride of lime will make the brine solution germicidal as well as antiseptic. The solution that has been found best is made of eight and one-half gallons of water, ten pounds of salt and one-quarter pound of chloride of lime. Fresh chloride of lime should be added each week to keep the solution at proper strength. The odor of chloride of lime can not be detected in the milk.

This solution has been tested just to determine what results it would give when used under ordinary farm conditions. When it was being tested, the tubes and cups were placed in the solution immediately after each milking, being first rinsed in cold water, while the tops were thoroughly washed with hot water and washing powder and the pails sterilized with steam. Once a week the tubes and cups were thoroughly cleaned with hot water containing soda, and were scrubbed with long brushes. The milk drawn from the machines contained no more bacteria than is found in certified milk.



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DOING THE OBVIOUS THING

War, we are told, is proving the mettle of our men. It is stripping them of all pretences and forcing them to show themselves in their true light, either as the real stuff or weaklings. No one remembers the bluff when the time comes to face the Hun, so every soul stands revealed.

It isn't the men over there who are being shown up alone. The folks back here are little by little, and bit by bit, being robbed of their pretences and revealed for pretty much what they are. Some of them, I almost said many of them, are not looking very well. In fact they resemble children, to put it as kindly as I can. They do a great deal of talking about their patriotism and wanting to do their bit, but when the bit they ought to do is shown them, they sidestep and choose something easier or more showy, but not one-half as necessary. A great many women are out looking for "a war job," who have left behind them at home the biggest war job they could do.

I dropped in to call on a neighbor the other day. Three children, aged four, three and two years old respectively, were whining and clinging to her skirts, while a six-weeks-old baby lay in the crib. It was two o'clock, but the breakfast dishes were still unwashed, the beds unmade, the living-room untidy and a basket of ironing waiting to be done. She dropped into a chair and burst into tears.

"I know it's awful to let things go so, but what can I do?" she sniffled. "I can't get a girl for love or money and the woman I have can't find one day a week and I can't find another. The children have cried all morning and the baby screamed with colic for two mortal hours. I did get a batch of cookies baked, and my curant ready for jelly, but I haven't been able to do another thing. When Jackie hasn't wanted something, Molly or Peggy have, and all the lunch I have had was the cold coffee and a piece of hard, cold toast that were left from breakfast. I wish I was dead and the children were, too. What's the use of living when you haven't the strength to take care of your house and family?"

"Why can't your sister come and help you?" I asked. Bessie is seventeen years old and the prize canner in her school. "School is out now and I should think she could help a lot. Surely helping you is the best sort of war work."

"Oh, she's gone up north to pick cherries," said Mrs. K. bitterly. "She pledged herself to work eight hours a day, with a half-hour for lunch, and she'll get just enough to pay her expenses—has to board herself while she is there and pay her own transportation. We'd be glad to give her her board and five dollars a week, but there isn't anything romantic about working in your sister's kitchen. She's helping the conservation movement, so she says. But I don't see any special patriotism in picking fruit for a commercial cannery. If she was going up to help a farmer's wife, I might forgive her."

"But I should think your mother would make her come and help you. Surely she can see it is more necessary to do the work right at home than it is to chase off across the province and clutter up traffic. I thought the government wanted us all to travel as little as possible. Your mother talked so beautifully last week at the club about doing the duty nearest and giving up our vacations."

"Oh, that's all for the other fellow," she sniffled. "Mother and Bessie need a rest. Poor Bessie is just worn out with standing around street corners on Tag Day and such like. Mother says she is entitled to a change and besides, there's a bunch of boys from the Junior College going up and there's a good swimming beach near and a dancing pavilion, and what have I to offer against the importance of cherry picking as necessary to win the war?"

"Your mother surely comes in and helps you out, though," I ventured. "She was around trying to get women to volunteer to go out two or three hours a day and take care of children or mend. Doesn't she do your mending and take the youngsters off your hands a few hours every day?"

"Mother is running a taxicab to relieve a man for war work. She never could do housework; it is too heavy. I believe she has joined the 'back-to-the-farm' movement, or whatever they call it, and is going to the country soon to help in the wheat harvest. She can handle a pitchfork all right, but it hurts her back to wring out a map."

There was a few minutes' eloquent silence. "I am ashamed of myself," she broke the silence, "and if I hadn't been so tired I would never have criticised my own mother and sister. But it does seem funny that so many folks can't see that their own blood and kin need a little help, isn't it? Mother isn't the only one. I know a half dozen, yes, a half a hundred, who are neglecting their obvious duty to chase about doing something everyone wishes they wouldn't do. And then we scold children for wanting to make a cake when all they can do is dry the suet."

Cut out and burn the old blackberry and raspberry canes as soon as they're fruited. Celery may be blanched by means of boards, paper or straw-ties. Each is likely to cause decay if applied when the soil or foliage is wet.