

# Soils and Crops

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

**Safeguarding Your Hogs.**  
Every breeder of purebred hogs can make a profitable investment of a few dollars and a few hours' time by constructing a small quarantine plant on his farm. Such a plant will safeguard the herd from disease introduced by stock from other breeders. I have found it a wise rule to keep in quarantine for at least three weeks every hog brought to the farm. The new arrivals should be closely watched, so that if any disease symptoms appear the animals may be dealt with accordingly.

A quarantine pen should be from one-half acre to an acre in size. The home herd should be excluded from it at all times, and should not be allowed to pasture close to it. Many breeders locate them in out-of-the-way places, often at some corner of the farm. Enclose a well-drained area with a heavy, woven-wire fence, which should be high enough to prevent hogs from jumping over it. Place an individual hog house in the lot, and install a dipping tank and troughs. A backwash-style platform, with a platform to the level of the pen, is not necessary, but will pay where many hogs are handled.

Whether you attend public sales or buy at private treaty, it will pay you to keep every new hog in your quarantine pen for about a month before he is turned in with the home herd. On arrival of the new purchase, dip him with a fairly strong dip and, if possible, give him the feed he is accustomed to.

No matter how healthy the hog may have been, he may contract disease in transit. You may buy a hog in perfect health from a disease-free herd, and yet in a few days he may develop cholera or some other disease.

Careful breeders quarantine every hog they buy, and every hog they sell is dipped before shipment. Dipping is practiced as much to prevent disease as to cure it. There are several dependable dips and disinfectants on the market. A supply of these should be constantly on hand. Not only should hogs be dipped with more or less regularity, depending on their condition, but their sleeping quarters and pens should be disinfected occasionally.

Dogs and other animals should be kept away. Cholera germs are often transmitted from one farm to another by cats, rabbits, and even by birds. In some places pigeons are a prolific source of cholera infection. These birds cover large areas, feeding in the barn lots of farmers in widely separated regions. The hog man's antipathy to pigeons is therefore well founded. Use the shotgun on them if necessary, but be sure to keep them out of the hog lot.

Quarantine plants will pay the breeder well indirectly, for visitors noting such devices will be inspired with confidence in the owner's carefulness. You will find it easier to prove the health of your herd by showing a quarantine plant, sanitary houses, and modern appliances for the stock than by talking.

The cost of the quarantine plant need not exceed \$50 to \$100. Many plants have been established for half that amount, depending upon the class of materials used. The pen can be used for other purposes; but if there have been cholera hogs in it, disinfect before allowing other stock to use it.

Plow or dig up the soil in it each year, and sow rye, rape, or some other forage crop. Do not allow blue-grass sod to establish itself in the pen, as sod is a harbor for disease germs. A quarantine pen is one of the cheapest and best forms of insurance you can use.

**Why I Use Concrete On My Stable Floors.**

No better stable flooring can be used than cement, and perhaps none other as good, when it comes to saving the liquids. In many parts of the country where gravel and sand are readily obtainable cement floors need not be expensive. Often, too, it costs less than timber and plank floor.

Cement floors properly laid are practically everlasting. Plank and timber flooring begins to rot at once. In a few years at best it is down and out and another must be built. A cement floor needn't be more slippery

than a first-class lumber floor. Stock of all kinds can be kept on cement with the best of results, if bedding is properly used. The cement floor is colder than the plank floor. But this is a matter of no consequence, particularly as stock should always have plenty of good bedding under them for their comfort and welfare. Don't let anyone tell you that a cement floor is too hard for a horse's feet. It would be hard for a horse to trot on all day, but in a stall he stands still most of the time, and when doing this he cannot tell whether he is on cement, plank, or dirt, if the bedding is sufficient.

I have been using cement floors for twelve years. They are all right in every way, and if they are properly laid and managed no liquids can get away. The bedding will soak it all up. And the liquid is worth more than the solids, pound for pound, on a basis of cost of the same elements in commercial fertilizers.

**Laying the Cement Floors.**  
"I'll have to hire a mason!" you'll say. No, you won't; do it yourself. The first thing is to put underpinning under the stable sills all around, should there be none now. This will keep out snow and cold wind. And you can lay the cement mortar right against this and make all air-tight.

If the floor is to be put in an old barn, tear out the plank and timber floor and fill with earth up to within three or four inches of the finished surface of floor. This filling must be packed solidly, so no part of it will settle after the floor is finished. If it should settle, the floor will crack. Water is useful to settle the filling. You do not need to put any foundation of stones under the floor. But tile drains around the outside of walls are necessary to prevent water from soaking in. If you want a gutter, dig it out of the earth, say eight inches deep and twenty-four inches wide, level from end to end. The liquid should be absorbed by litter, and not be allowed to run to one end or to drain away.

Before laying the floor, be very particular to have the grade of the floor just right, so that it will drain to the gutter. If you use stanchions, about one and one-half inches fall from the manger to the gutter will be all right. Four and one-half to five feet is about the right length for the floor. Jerseys can manage with four feet of space, but Holsteins will need five feet, or more if they are large.

Your sand must be clean and free from dirt, and it will be better if you use crushed stone instead of gravel. The mixture I use is two parts of gravel or crushed stone to one of sand and one of cement. Mix thoroughly with dry. A good way is to shovel it from one box to another, dropping each shovelful in the middle. If you have one man rake back and forth rapidly as the shovelfuls fall, the work will be perfectly done.

When the dry mixing is complete, add water gradually, mixing with a hoe. Make it just thin enough so it will pour out of a pail readily, but not rapidly. While the first batch is being used, have hands mixing another. Allow no mortar to set at all before using. Four inches is amply thick for floors under cows and horses, and two inches is sufficient for manger bottoms and feeding alleys. The floor should be even, but not troweled down smooth. The use of a board float and fine gravel in mortar will make a splendid surface that is not slippery.

A form of the desired length, width, and depth is needed for this. Lay the mortar in bottom of gutter, then put form in place, leaving three inches of space on each side of form. These spaces can be filled as you lay the floor, and a walk behind them can be made at the same time.

It is well to shut all wind and sun from the newly laid floor. Sprinkle it freely with water several times a day for ten days or more. As soon as it is set you can walk on it. It is better to dry slowly.

You will soon see the difference in the manure, and you will be just like me—surprised to see how much more manure you have, and how much more good it does when the liquids are saved.

## Poor Chimneys Cause Fires.

A summary of the various causes of fire shows that fires which can be traced to faulty chimneys annually amount to from ten to twenty-six per cent. of the total number, while in winter the percentage has reached as high as fifty. This is significant when it is realized that most of these fires result from carelessness and could be avoided by proper attention.

Chimneys in frame buildings should be built straight up from the ground and not placed on a bracket, as is often the case, and should extend two feet or more above the peak where the chimney is in the centre of the roof, and three feet or more above the surface when on a flat or slanting roof. For proper draft, the minimum-sized opening for the flue should not be less than sixty-four square inches, while the walls should be at least eight inches thick. At the base of each flue a clean-out door should be provided, if possible.

The joists used to support the floors through which the chimney passes should not have their ends supported in the brick, as the chimney may settle, leaving at these points cracks through which fire can creep to the joists; furthermore, no other woodwork should come in contact with the chimney.

To obviate the fire hazard in brick chimneys it is suggested that a fire-clay or terra-cotta flue lining be used in their construction. The lining serves as a fire preventive, and gives a flue of uniform dimensions. The ordinary brick chimney will not do this. It is possible to use fire-brick in place of the fire-clay or terra-cotta tile, with the same result.

Cleanliness is next to godliness, but a clear conscience is better than a white collar.

Truth is the most effective weapon against error.

## Uses for the Camera on the Farm

Outside of farm and home machinery, I doubt if there is any device more useful on the farm than a camera—and I am not in the camera business. I never sold a camera in my life, though I have bought several and still have them all, using them for different purposes.

The most useful purpose that a camera serves on the farm is in taking pictures of livestock. A man can not always find a good market for his purebred livestock right in his own neighborhood, and if he is negotiating with a buyer at a distance, a good photograph will clinch the bargain where pedigrees and description will not.

It is true that cattle, horses and other livestock are not easy to photograph—they haven't learned to pose like human beings; but a good farmer will soon learn to take as good pictures of them as the average professional photographer in the town can take. It is largely a matter of picking out the points you would like to see, if you were the buyer, and then posing the animal so that those points will be visible. A study of some of the good animal pictures in farm papers will help.

Some farmers that I know use photographs to sell seed. They make more or less of a specialty of growing seed. They photograph their fields of corn, alfalfa, and other crops, and send these pictures, or cuts made from them, to prospective seed customers. The customer is unconsciously impressed with the idea that seed from fields like these must be pretty good.

Photographs are often the determining factor in profitable selling of farm land. Pictures of the house, the barn, and outbuildings, the fields and the garden, help the prospective buyer, if he is at a distance, to visualize the place. Real-estate dealers have recognized this for a long time; farmers might as well make a profit in this way.

A camera, however, has a great many uses that are not connected with money-making. I don't know any first-class farmer who has built up his farm as a fine, modern business, who wouldn't give a lot for a set of photographs showing how that farm grew—photographs of new buildings as they were put up, of new machinery purchased, of fields that made especially big yields. It would be a history of his business, pretty nearly a history of his life—and a camera would have given it to him.

Then there is the family; pictures of the wife, of the children as they grow up, with their pets and at their play—they'll be worth a lot some day, when the children perhaps are settled on farms of their own.

It has been my observation, too, that a camera keeps the boys and girls out of mischief, and keeps them interested in the home farm when otherwise they would be talking about going off to town. I believe in teaching children to go hunting with a camera.

**SPROUTS**  
To get green poultry feed, barley is the best grain. Cover as much as needed with very warm water and let stand for twenty-four hours. Then draw off the water and empty the grain into a shallow box with holes in the bottom. Keep the grain quite moist with warm water and turn frequently so it will sprout evenly. Set in a sunny or warm place, cover with sacks, and in a few days it will germinate and start growing. When healthy, green sprouts show, use as feed. Have a number of boxes in the work to keep a supply.

## More Returns from Unproductive Acres.

The average hay acre produces annually one and a quarter tons of hay, and this even in sections where stock is kept primarily for the manure produced. Crops of this size cannot compete successfully against the attraction of two-dollar wheat. With grain high in price, stock of all kinds must consume more hay, more roughage and less grain than in years past. Therefore, the first step in attempting to grow grain crops and to keep stock at the same time, must be to produce better hay and more of it per acre, so as to release more land for grain production.

Top-dressing a good sod with fertilizer gives wonderful results. This has been tested out at many of the agricultural experiment stations, but nowhere is it better illustrated than in the test at Cornell Agricultural Experimental Station. To show the remarkable results, we present the following data:

(1) In this test every 100 pounds of a high ammonia complete fertilizer produced one-quarter ton of hay, and later brought a substantial increase in the following corn crop, without further fertilization;

(2) The top-dressed sod, when turned under, increased the organic matter of the soil by an amount equal to that contained in a 6-ton application of manure.

On the average farm, hay is fed to stock and the manure returned to the land. Thus it happens that the plant-food in the fertilizer may be used again and yet again. In the Cornell experiment the ammonia applied in the fertilizer was apparently all returned in the increased hay crop—none was lost by leaching. If the manure made by this hay were carefully

The so-called box camera—a camera with fixed focus and without bellows—does well enough for snap-shots and is better for children to use than a more complicated instrument. If you want to do really fine work, however, it is not satisfactory.

At the other extreme, so far as cost and complexity are concerned, are the extremely rapid cameras with focal-plane shutters. These will make exposures as brief as 1-1600 of a second. They are used by newspaper photographers and other persons who have need of an extremely rapid machine. It would be a mistake for the average farm owner to buy such a camera.

The most satisfactory all-round camera is a focusing camera which has a view-finder and a focusing scale in front, but also a ground glass in the back. The best photographers focus their views on the ground glass, using a view-finder and scale only in case of emergency. A camera of this sort can be obtained which will use roll films, glass plates or film packs. The plates or packs are used when you employ the ground glass. A swing-back is useful on a camera, and is practically essential in taking photographs of buildings, silos, or other tall objects; otherwise, the pictures will be distorted.

If you are going to take pictures seriously, it is worth while to put money into a good lens. All the better cameras may be obtained with various lenses. For farm use, a "hard" lens with considerable depth of field is desirable. The shutter should be between the two sections of the lens. It would take too much space to explain just what a "hard" lens embodies, but any good optical or photographic manufacturer will inform any inquirer which of his lenses are "hard" and which are "soft." Both types of lens are in common use, but the "soft" lens would not be very useful in farm photography.

A camera taking pictures six inches in size is best for photographs intended for publication, but for other purposes a smaller camera is just as good. Three standard sizes are 3 1/4 x 4 1/4, 3 1/4 x 5 1/4, and 4 x 5. The larger the picture, naturally, the more expensive are films, plates and other supplies. Cameras smaller than the ones mentioned, however, are not satisfactory for all-round use.

Plates and films both give good results. Plates are much less expensive, and they are less bothersome to handle in developing by hand. On the other hand, films are lighter, are not breakable, and are not subject to the spreading of light on the negative due to reflection from the back of the plate.

Any camera requires careful and intelligent handling to give satisfactory service. As a rule, the more expensive camera, being more complicated, is more difficult to operate. By following directions, and by practice, any one can learn to use a camera to excellent advantage.

What part of your investment is in land, buildings, live stock, machinery and other capital? Is your area properly proportioned to the various crops with regard to profits? With regard to labor distribution? How do your crop yields compare with the average yields of the locality? What classes of live stock return you the most money? How do the returns from your live stock compare with the average of your locality? How many acres of crops do you raise per man? Per horse? Is your farm so organized that each part of the business is yielding satisfactory returns?

How much have you left for your own labor, after deducting from your total receipts your year's expenses, value of labor performed by members of your family and interest on your investment? How much does the farm contribute toward your family living?

The right way to live is as if each day were our last and last.

—Edgar A. Guest.

## The Welfare of the Home

### Do I Understand My Children?

By ANNE GOODWIN WILLIAMS.

"I just love Miss Brown," said Betty Jane, "she's the understandingest person I ever knew!"

What a wonderful tribute! Is there anyone of us grown ups who does not to deserve just this sort of approval from the little children we love?

As we recall our own childhood experiences, do not the times when we were misunderstood, stand out very distinctly and very bitterly in our minds?

A mother told me of a little child who was angered almost into hysterics by having his lip mimicked and mocked. "Do you want me to think for you?" little John asked a guest in the friendliest fashion. "Yes, indeed, you darling, I want you to think for me," the visitor said laughing, imitating his lip. The child's ears were keen. He recognized the correct pronunciation although his lips could not yet form it and his face reddened as he said in a pained voice, "I didn't say that. I said 'think'."

"Oh, you precious lamb, think for me, think for me—I don't care. I just adore that lip of yours."

Did she get the song—the child's offered gift to a guest? No, emphatically no. She had killed the joy of self expression. She had grieved the boy and made him sulky and she had truly been guilty of an act of rudeness to a trusting little child.

And yet she thought that she loved children! But she lacked the understanding of the sensitive nature of a little child. Ridicule is even harder to endure when one is four years old than when he is fourteen or forty.

But rude and cruel as it is to laugh at the mistakes of children, it is far worse to laugh at their fears! Just because we know that there are no goblins lurking in the dark, we find

it difficult to understand the agony, the actual suffering of a sensitive, timid child who is forced to fight for his fears all alone.

All lovers of children condemn the ignorant nurse who threatens, "The Boogie Man will get you in the dark to-night if you don't mind me." I know one mother who came home after making some afternoon calls and found her little son in bed with a high fever and in his delirium he cried out over and over again, "Don't let the policeman get me—Don't let him take me away from my mother—Don't let him—Don't let him!" The thoroughly frightened nurse confessed that she had put him to bed as a punishment and had left him there, saying, "Now I'm going out to get the policeman to take you away so you won't see your mother again." She had left him there alone, thinking that his screams of terror when a door opened or closed, would "teach him a good lesson."

Dorothy Canfield Fisher's "Understood Betsy" is a most delightful study of a child who was sometimes misunderstood, a story so charmingly told that grown people and children can read it together with great enjoyment.

And, after all, is not that the great secret of understanding—the doing of things together, talking together, walking together, sharing each other's joys and sorrows?

"Never mind, honey," said one Isis to her dearly beloved kindergarten teacher, "never mind if you are hourse. I will tell the children a story to-day and you won't have to talk." Isn't this a true illustration of the mutual desire to be of service which we so long to have underlie our relationship to the children who are little children for so very few years?

A good name in our own neighborhood is far more to be desired than preferment among strangers.

There is no sweeter sight in all the world than the lights in one's home upon returning after an absence.

## 1000 Eggs in Every Hen

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## ROSE PERENNIAL

The worn gray slab yet lies before What once was a thrifty farmer's door;

Now roofless cellar and scattered stones Show skeleton hopes with time-picked bones.

Here backed against a crumbling wall Still blooms at bay, unpruned and tall A soil-disdaining moss-rose bush, The delicate buds in faintest flush;

Clutched by the brambles and woodbine Whose envious fingers tear and twine, There was the huge barn; here the yard.

Where the grim farmer labored hard From dawn to dark, and never knew A dream beyond the crops he grew, The stock he raised; the silver store Under the loose board in the floor.

To and fro, to and fro, The feet of his little wife would go, All day long and half the night, Up a flight and down a flight;

Pantry to kitchen, pen to barn, Cellar to garret with loam of yard; In to the babies, out to the men, Down to the pasture and back again, Farms were never planned, you find, To save the steps of womenkind.

One can trudge and drudge through a long life's course, If she discovers a hidden source To seek when the spirit is faint and dry.

Here was her rose-bush growing high That he never knew—for he never cared— This was her joy no mortal shared; Her hands were never too stiff or tired.

To foster beauty the soul desired; Never too worn the busy feet, Never too dull the old heart's beat, For a future trip to the little shrine That made the moment a pause divine.

Here by the bush one glimpsed the hills, Where forests crooned and ran free rills;

One breathed deep drafts from a windswept sky, Sunset, moonlight, mystery.

This was her rose-bush by the wall. Gone is the farmer, farm and all, The herd, the crops, the silver store, The children grown return no more To the hearth deserted, the loveless place.

Haunted by one enduring grace— A dream of beauty torn with brier, Clutched in vain as it clambers higher. —Abbie Farwell Brown.

## Fertilize the Orchard.

In the November issue of the American Fruit Grower, we find the following question from a subscriber in Virginia:

"My trees are about thirty years old and have not been bearing very well lately. The foliage doesn't seem to be very strong and the fruit is rather small. I have done some pruning, but they are still rather thick in the centre of the trees, I think. What treatment would you use? The orchard is in soil and is too steep to cultivate."

The answer will probably be interesting to our readers. We quote part of it as follows:

"Judging from the description of your orchard, I would say that your trees are starving for want of plant-food. There are hundreds of orchards over the country where the trees are in this condition, but if proper methods of fertilizing and care of trees are used, these orchards can be made to produce very profitable crops. Of course your trees should be properly pruned. Thin out the surplus limb growth, particularly in the centre of the tree. Let in some sunshine and air. Your fruit will color better and have less trouble from fungus diseases if the head of the trees is open.

"As your orchard is too steep to cultivate, I would advise leaving it in sod and depending on fertilizing. Of course your trees should be thoroughly sprayed. You will be surprised what a big difference this treatment will make in the first year. It will pay you many times over for the fertilizer and trouble. As it is now, your orchard is not a paying proposition. By giving it the right care and following this method of treatment, you can make it a big payer. Just remember that land that has been planted to corn so much that it has become poor, will not raise a good corn crop, particularly if the farmer does not cultivate it. The same thing applies to an orchard. You have got to give the trees some attention, and if you do you will be paid handsomely for everything you do for the orchard."

## It Pays to Top-Dress Land.

Four years ago it paid big. Or, in other words, one dollar spent in fertilizer turned to five dollars in hay. The cost of the fertilizer and the cost of the hay were about the same then. The cost of fertilizer and hay have both risen proportionately since then. It would seem that there was still money in top-dressing hay ground.

Memory is the lever by which we make the engine of time run backward.

Chance is but a zigzag lane to nowhere.

Elbow grease is the essential of industry.

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