

Soils and Crops

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

Types and Principles of Piggy Construction.

A consideration of types and principles of piggy construction brings up a classification of swine growers, roughly as follows:

1. The farmer who keeps two or three sows, and from which class comes the great part of Canada's hogs.
2. The farmer who specializes a little more in swine growing, keeping five to six brood sows and a boar.
3. The out and out hog-man who goes in for hogs exclusively, keeping thirty, forty, fifty or more brood sows and working, as closely as possible, to the two-litter-a-year plan. There are few in this class.

Considering, briefly, the types of buildings required for the above classification the following basic principles must apply to all:

1. Economy. No business can operate efficiently with too much overhead expense. Pork production operates on a close margin of profit. In the main, comparatively cheap buildings are advisable, not only on account of low cost, but because they are best otherwise.

2. Dryness and good ventilation. These must be obtained in some way. Possibly no farm building is more difficult to ventilate than a piggy, and no animal requires fresh dry air and quarters more than a hog.

The man who keeps two or three sows needs few, if any, special buildings. His sows are wintered in low, straw-covered sheds or shelters adjacent to the barnyard. They summer on pasture with a cheap lean-to or cabin for shelter. Two main requisites are automatically acquired: fresh air and dry quarters and exercise. At farrowing time a box stall is usually available. If the litter comes early, such quarters usually prove sufficiently warm for the little pigs. These, after weaning, may be fattened on pasture or in a paddock or dry lot with a cheap shelter, or, if indoor feeding is preferred, in a shed or empty building improvised for the purpose. This may sound like making shift practice. The fact remains that not one cent more than is absolutely necessary should be expended in hog-equipment.

Consider the case of the next class—the man who keeps five or six sows. His breeding stock should be handled as in the foregoing. The essential building is for farrowing his sows. If his sows farrow all about the same time and if he plans for fall litters early enough for successful winter feeding, he must have heated quarters; in other words, a building all or part of which is warmly built and therefore a comparatively expensive structure. Generally speaking, the best arrangement makes possible the closing off of two or three pens next to the feed room, where a heater may be installed. This portion of the building must be double boarded and tightly ceiled and with a ventilation system. Cement is excellent in the main, but the farrowing pen floor must be of wood, or cement covered with plank. A drainage system must be provided to ensure dryness. For the balance of the building excellent results have been obtained by making use of single board walls, a slatted ceiling covered with straw, earth floors and a floored section over which is built a low, straw-covered sleeping berth. Such quarters are excellent for young weaned pigs or for fattening hogs at any time of the year. Ventilation is automatic. The expensive construction is limited to where it is really essential. The balance is of cheap construction. Plans of piggeries of this type may be obtained from the Annual Husbandry Division, Central Experimental Farm, Ottawa.

The extensive hog-man needs special buildings. Nevertheless, he must strictly follow economy in construction. Expensive or comparatively expensive construction is required only for farrowing quarters. Open sheds with straw-covered sleeping quarters have proven excellent for winter fattening of hogs. The straw-lot, earth-floor, enclosed-berth type of building makes an excellent and comparatively cheap structure which embodies all of the essentials and which is useful for every class of hog, with the possible exceptions of the early farrowing sow and the sow during the gestation period. The cheap, portable cabin is a building much in demand on the big hog farm, both in winter and summer. Plans of the larger types of piggeries may be secured from the source already mentioned.

Keep the Chicks Growing.

We have often noticed a serious setback in growing chicks if the proper ration is not provided at the time the chicks are able to range about and begin to hunt for themselves—too often at this time the feed necessary for their quick development is withheld.

This is when we bring our chicks self-feeders into their greatest use and provide a good mash that will assist the fowls in growing a good frame, plenty of plumage, and keep them in active working order. When the chicks weigh about a pound apiece and just at the time they are passing through the broiler stage, they require a good deal of feed, yet nothing extraordinary in comparison to the am-

ount that would be required to bring them to maturity, and the feed should be of such a nature that will keep them growing rapidly.

Meatscrap in the ration is one of the essential feeds that will keep the chicks in good order and since this feed is generally high in price, just enough should be fed to provide the chicks with the necessary amount. As near as we can tell, we believe that a ration of two parts corn, three parts bran, one part meatscrap by weight, supplies this requirement. The chicks ought to have cracked corn in addition as scratch feed, as the use of the scratch feed will require less of the mash, which is really the expensive part of the ration.

By the time the cockerels are two pounds they should be marketed for broilers and attention given to the development of the pullets. The same ration should continue throughout the growing season, we believe, but, of course, should be changed some near the time the pullets begin to lay.

A good deal of labor and trouble may be saved by providing a large self-feeder with the mash, where the growing fowls may get it whenever they wish. We use a feeder that will hold about ten bushels and have the ration mixed by the feed dealer. In this way we can handle several thousand chicks easily in the growing season.

To supply water, one of the easiest means is to secure a pan about three feet in diameter and install one of the old-fashioned floats that were so common in our barnyard watering troughs. This may be attached to a pressure system or gravity system and will, of course, allow water to come in as fast as removed. In this manner if the pan is in a protected place, the water will not become hot, and fresh water is supplied at all times without any necessary attention. A device like this works well on an electric pump, such as is being installed with the farm lighting system.

A good building is as essential during the summer time as during the fall as the pullets need protection from the cold rains and a clean, well-ventilated place to roost. Young pullets that are accustomed to a good house will not stand around under bushes on rainy days and lower their vitality, which really impairs them as winter layers.

Heavy or Light Cream?

Comparatively few owners of cream separators understand the proper adjustment of the cream screw, to say nothing of the adjustment of the rest of the machine.

The cream screw is intended to control the consistency of the cream that the separator delivers. However, this screw does not, as is generally supposed, regulate the efficiency of skimming. The machine will, as a rule, skim just as clean when delivering a heavy, high-testing cream as it will when skimming a thin, low-testing cream. The cream screw should be so adjusted that it will deliver a heavy thick cream unless the owner is selling the cream by the quart. If the owner is selling by the volume, he should have his separator adjusted so that it will deliver cream as near the requirement as possible because at this point it will net him the most profit. Once the cream screw is adjusted to the proper place, the owner naturally concludes that all the cream skimmed will test the same or nearly the same. Consequently when the cheque arrives for his shipment of cream and he finds that it did not test nearly as high as the previous shipment, he wonders why. Usually he blames the consignee and says the cream was not properly tested.

Such misunderstandings resulting in the cream producer accusing the dealer of improper testing can often be avoided if the owner of a separator knows that a number of factors other than the adjustment of the cream screw will cause a variation in the test of the cream delivered.

A few of the factors that cause this variation are:

1. Skimming the milk when it is excessively warm.
2. Running the speed of the separator bowl too low.
3. Forcing the milk through the separator too rapidly.
4. Flushing the separator bowl out with large amounts of skim-milk or warm water, and permitting the cream delivered from these flushings to mix with the other cream.
5. Skimming low-testing milk.

On the other hand, some of the factors causing a heavy cream to be delivered, when the cream screw is not tampered with, are:

1. Skimming cold milk.
2. Increasing the speed of the separator bowl.
3. Reducing the flow of milk into the separator bowl.
4. Not putting the bowl flushings in the cream can.
5. Skimming a richer milk.

These factors are the most important ones that cause the variation in the test of the cream delivered from the separator.

It is easy to conclude that both the heavy and the light cream have their market. Which is best for the average farmer? Any person that is selling

cream on the Babcock test, especially where he ships his cream, can make more money by skimming to produce a heavy, high-testing cream.

In the first place the farmer that skims to produce a high-testing cream will keep more skim-milk on the farm, thus saving the transportation charges and the skim-milk at the same time. For example, if a farmer sells a hundred pounds of butterfat in cream and receives thirty dollars for it and it came from cream testing twenty per cent, he would have to ship six ten-gallon cans to hold the five hundred pounds of cream. He would have to pay the transportation charges on four hundred pounds of skim-milk besides losing the skim-milk worth fifty cents per hundred pounds. However, if this farmer would skim so as to produce a heavy cream testing forty per cent, he would receive the same amount (forty dollars) for the one hundred pounds of butterfat contained, but would have to ship only three ten-gallon cans to hold the two hundred and fifty pounds of cream. He would thus save two hundred and fifty pounds of skim-milk worth \$12.50, besides the transportation charges on the same two hundred and fifty pounds.

Aside from the saving of skim-milk and transportation charges, the producer of heavy or light cream saves on two other ways. First, he has less cream to cool and handle, thus saving time and labor; secondly, his thick cream can be kept in better condition and he will receive a better price for it at the creamery.

If a thick cream will net the producer more he had better adjust the cream screw properly in the first place and then pay attention to these other factors that cause the separator to deliver a thick, high-testing cream or a thin, low-testing cream.

The Dairy

Teach the young stock to lead at an early age and it will save many stubborn contests later in life when the animals are strong. If each heifer has a halter she will be easier to handle in the pasture lot and soon learn that a tug on the halter means to follow.

If a farmer needs his skim-milk and lives in a section where farmers are selling milk, he can often build up a good butter trade in his own neighborhood. There are a lot of farmers that buy all their butter and it is true that many farmers owning herds of cows really eat butter instead of cream. This gives the butter producer a lot of skim-milk for poultry and stock feeding and a nearby outlet for the butter.

Cows that freshen in the fall show a great increase in milk flow in the spring when placed on pasture. This helps to keep up production until time for the cows to dry up. Cows that freshen in the spring are more difficult to handle profitably in the fall when pastures are often dry and conditions are less favorable for keeping up the milk flow.

When veal is cheap and feeds are cheap it ought to pay to keep the best heifer calves on the chance that cows will be good property a couple of years from now. It is easy to say that cows are cheap and there are lots for sale, but when you start out looking for those cows you find that the farmers are keeping the best ones and some of the cows for sale cheap are not much good.

MY WIFE AND I WORKED OUT OUR FINANCES TOGETHER

By Ralph Eastman

I suspect that too many of us farmers do not give our wives credit for the money they are worth. I often-times a man will call on the phone and want to talk to me. Yet I hate to want to know could have been told by my wife just as well. In fact, I doubt if there is any business on earth about which a man's wife knows as much as farming. The farm wife lives right on the job; she has a chance to hear what is going on, and to talk it over three times a day. I have learned to let the woman who answers the phone before having her "all her man" in from the field. And I usually get the information I want.

When my wife and I started out on our farm-life honeymoon, after a few days of the usual kind, I decided it was time to get somewhere financially. Money—or the lack of it—was seemingly the biggest problem of the older folks I knew. The women hated to ask for money, every time they needed it. The men usually gave grudgingly, or else forgot it altogether.

In our case we had just bought a farm and were in the hole quite a bit on it. Neither of us had any left from home, nor did we expect any. Both were able to earn a little on the side, which helped a lot the first few months. Anyone who has ever bought a "start-up" furniture, farming tools, stock, and so on—knows what it means to start out in debt.

We have arranged our finances like this: We each have a cheque book, but we only have one account. When there is money to spend, my wife spends it as she needs or wants to. I do, the same. I don't ask her how much her new waist or shoes cost. I don't care, anyway, I wouldn't know whether

The Children's Hour.

How such a roly-poly little girl could run about all the time was a wonder. But Laura simply could not sit still for long. That was why she loved her bean bag better than her dolls. She had to be careful not to break the dolls, and they always sat about very quietly, anyway. But the bean bag! She could toss that up into the air and run to catch it, and if she did miss it, it did not matter. It was almost more fun to do that, and see it fall down in a little heap.

Besides that it really was a very nice bean bag. It had a blue-and-white-checked gingham cover, just like one of Laura's rompers. And it was full of smooth, round, white beans; Laura knew, because she had seen mother put them in, and then saw her up the corner of the bag. And even though the beans were out of sight now, she could feel them through the gingham, and, of course, they must still be just as white.

One day Laura's mother was helping her to play with the bean bag. Suddenly she cried:

"O Laura, this bean bag is getting worn out! We'll have to make another."

"No, no!" cried Laura, shaking her head. "I don't want another bag, mother! I want to keep this one!"

That very day the bean bag caught on a sharp stick that stuck out of the little pear tree in the yard, and Laura had to stand on tiptoes and pull and pull to get it down. At last the twig gave way, and the bag tumbled into her hands.

Just then a beautiful yellow butterfly came floating past, so near to Laura's face that she was sure she could catch him.

But she could not quite reach him; so as he flew along she ran after him, holding her bean bag tight; she did not mean to lose that. But she did not see a little three-cornered tear in the gingham cover of the bag—a tear just large enough to let a bean slip through nicely.

The butterfly kept out of Laura's reach. He flew this way and that, in and out and round about, fluttering over the soft earth in the garden that had a halter she had been digging up to plant it with little brown seeds.

At last the butterfly rose higher, and flew away altogether. Laura stood still for a moment; she wanted very much to cry.

But then she had her bean bag!

Why, what—what was the matter? The bag was not round or fat or heavy any more. It was just an old gingham bag, quite empty. Where had all the pretty white beans gone to?

Laura ran to mother as fast as she could, for now she really was crying; and while she ran the sky, too, began to cry, shedding great swift drops. Mother saw Laura coming; she ran out, picked her up in her arms and hurried back to the porch with her. As soon as they were under the porch roof Laura cried:

"Mother! Mother! Just see the bean bag! What's the matter with it?"

Then mother looked at the poor thin bean bag that used to be so fat.

"Your bean bag is torn, dear," she said, "and all the beans have fallen out of it."

"Fallen out!"

Laura had never thought of that.

"Then please come and help find them, mother."

"Oh, no, dear, we can't go out in this rain. Besides, the beans will all be covered with dirt. We'll just make another bag."

"I don't want another bag," said

The Welfare of the Home

How Big is a House? By Dorothy Canfield Fisher

The lecturer was describing and advocating modern, humane and intelligent methods of dealing with young children. As he paused for an instant, a grim-faced woman rose up. "Will you answer me one plain question?" she challenged him. "This shilly-shallying with children is all right at times, but there are times when nothing but a good spanking will do. What do you do when a child stamps his foot and says 'I won't do it!'"

The lecturer waited. The questioner added nothing to her question.

"Do you call that a plain question?" he asked in an incredulous tone, as though he could not believe his ears.

"Certainly do," she said with satisfaction.

"Well, Madame," said the lecturer, "I will answer that plain question: you will answer one of mine. How big is a house?"

The woman started. "That's not a plain question. What sort of a house?"

"Ah!" said the lecturer. "You can't answer me till I have told you what sort of a house? Well, I can't answer you till you tell me what sort of a child."

"I don't see what that's got to do with it," said the woman, but somewhat taken aback.

"Well, here's a case. A little child of three, very nervous, sensitive, recently over an illness, has been on a long, hot railway journey. At the end, exhausted from lack of sleep, excited

to the point of distraction by the noise, and a thousand fears he cannot explain, with a beginning of stomach-trouble from the irregular meals, he is told by someone who does not understand children to carry a satchel much too heavy for him. Perhaps you would expect a three-year-old to say, under such circumstances, 'I'm sorry, but I'm not feeling very well and it is really quite beyond my strength.' But I don't blame him a bit for stamping his foot and screaming. And certainly he does not deserve the same treatment as a loutish boy of fourteen who refuses to obey a reasonable request. And yet you expect some answer that will be the same for both these cases."

Every child is different from every other child, and only his mother is in a position to know how to take him. All sets of circumstances are different from all others and only those who know all about the case have any chance of guessing what is the right thing to do. You must do that most difficult of all things, think, and think hard, before you know what is the right thing to do. Just before you begin to think, just remember that if a child stamps his foot and says "I won't," to you it is because you have brought him up wrong. When you see a dog that habitually snarls and shows his teeth, you do not say "What a disagreeable nature that dog has." You say, "Heavens! what a brutal master the poor creature must have had."

plants. As this can be done quite readily it is possible that it may be spread by pickers, cultivating machinery or possibly by insects.

Control—in view of the fact that diseased plants produce seed carrying the virus which in turn produces diseased plants, and that the disease spreads in the field under normal conditions, there are certain precautions which should be taken until more satisfactory methods have been discovered. The grower should obtain his seed from fields or stock which was not infected the previous season. If he does not know of a disease-free field he should obtain it from exceptionally high yielding fields. Following this, he should go over his seed, producing field repeatedly during the summer, removing all diseased or weak plants. He will also gain advantage by selecting his seed from healthy, vigorous, high yielding plants.

Hand-selection of seed, seed treatments or spraying will not control the disease.

While you are complaining of hard times the other fellow is getting the orders.

Milk is the only food that contains all the elements necessary to build up and repair the tissues of the human body.

The grandest of heroic deeds are often those which are performed within four walls and in domestic privacy.

The poultry feeding problem is greatly simplified if flocks of about the same age are kept together. What is an ideal ration for old hens may be entirely wrong for pullets. Separate them so as to obtain approximate results while feeding.

WOOL

Pack up your lot and ship to us. We do the rest—fair grading—highest prices—spot cash payment. Try us.

WM. STONE SONS, LIMITED
WOODSTOCK, ONTARIO
Established 1870

American GALVANIZED Steel FENCE POSTS

THE POST without a FAULT No Clips or Staples Necessary Manufactured By THE CANADIAN STEEL and WIRE Co., Limited HAMILTON CANADA

THE FARMER'S VACATION

Why shouldn't the farmer take a vacation? People in every other vocation take their annual vacation, from manager to floor-sweep—a vacation on full pay, at that. Do they need it any more than farmers? The old-age idea has been that the family who lived in the country was having a vacation all the year round. The farmers have fresh air every day, they probably have some pretty landscape to look upon, there is plenty of clear sky above their heads; now isn't that a vacation? Not exactly!

Vacation means a change of surroundings and time to relax for play. Did you ever hear of anything on the farm that would meet that definition? Hardly! If any people in the world have a more routine, more seven-days-in-the-week job than farmers, let them for the first time proclaim it. I believe the old sage had the farmers in mind when he said, "Man's work is from sun to sun," and he surely must have meant the farmers' wives when he said, "Woman's work is never done."

Take the whole family on a vacation and find the real truth in the maxim, "All work and no play—You know the rest." One of the best ways to keep the boys and girls interested in things agricultural is to plan for a week of play and recreation, or two weeks if you can stand it.

A vacation for farmers is one of the best investments that they can make. It is something that will be a bright light of anticipation in the mind of every member of the household to keep them contented all the rest of the year. You can't be too busy for a vacation. There must be a time for play and a change of surroundings in every man's life, that will for a short time at least take him away from his toil. That will temporarily lift his "nose off the grindstone" and give him a new courage, a breathing spell, a new hold on his life-work. In the matter of needing a vacation, farmers are no more an exception than are the city men.

Tent Caterpillars.

About the time the leaves are unfolding in the spring the tiny eggs of the tent caterpillar begin to hatch and the young larvae escape and go in search of some nice tender foliage. The previous fall the mother moth was considerate enough to place these eggs close to the food supply. She selected a small twig on a wild cherry, apple, or some other convenient tree and around this she laid her several eggs, cementing them over with a waxy preparation in order to protect them against the weather. The larvae, after hatching, select a convenient fork in the branches, or on the trunk, in which to build their web, or tent, and from this they go out in the search for food. If these caterpillars are not controlled early in the season they will soon strip the foliage from the nearby limbs. If they are on a young tree it will be entirely defoliated by midsummer.

As soon as the small nests are detected early in the season they should be destroyed to prevent further defoliation of the tree. If they are within convenient reach they can be torn out and the larvae crushed on the ground, or burned. Then an examination should be made to see if there are any larvae left on the tree near the old nests. These should be destroyed if possible. The use of a torch will be found to be a convenient instrument in destroying those nests beyond reach, but care must be exercised so as not to burn the bark, thus killing it and perhaps causing a permanent injury to the tree itself. Its use is safe on the smaller branches or twigs, but on the larger limbs it will be safer to destroy them by hand. A spray with arsenate of lead will keep them from extending their work. The regular sprays recommended for apples will also keep them controlled.

Fruit Prospects.

The fruit industry of Canada occupies a different position from other branches of agriculture, inasmuch as it received no stimulus during the war. In fact, for reasons well known, the industry declined during that period. Curtailment of production is not being thought of, however, but special efforts are being made in increase it and to build up marketing machinery in order to obtain a better distribution of the crop. The remarkable prices obtained for small fruit during the past four years have naturally resulted in increased acreage, especially of strawberries; and if the present prospects for the coming crop are realized, the prices for these and other small fruits, will be lower this season, especially in view of the small requirements of the canning and jam factories.

As regards apples, the situation is very different for small fruits. The bearing acreage cannot be materially increased for at least seven years; and it seems reasonable to expect that the price of the better varieties and grades will be well maintained.

An acre, under favorable conditions, will produce 20,000 lbs. of onions.

One can never gauge the depth of a man's knowledge by the intensity of his silence.

Delicious sandwich filling is made of cheese chopped fine and mixed with chili sauce. Another filling is made of raisins and nuts, mixed to a paste with cream.