

made prompt sale of the whole at an advance of \$25.50 for the car load. In other words they were worth just as much as the finest Duchess and \$2.55 per barrel more.

In the orchard my trees are hardy, handsome, and productive, and I believe in the Lubsk Queen as well as the McMahan for the business orchard.

A Valuable Combination.

If I wanted to make a combination of three kinds to grow the greatest amount of fruit in the first ten years from planting, I would take Yellow Transparent, Longfield and Wealthy. They will not only all bear young, but keep persistently at it, and if properly handled there is money in them.

To the long headed business man there is a world of splendid possibilities in the top grafted orchard. For this use I know of no tree so promising of good results as the Switzer.

It is a fine grower and very vigorous tree in the orchard. It is to be grown from five to ten years and then changed to produce such varieties as Northern Spy, Newton Pippin, Spitzenberg, etc., those finest quality apples of all known. The vigor and strength of the Switzer tree would improve these apples in maturity, quality and size, and also make them more productive, hardy, and profitable.

The Apple a Northern Fruit.

The apple is a northern fruit, and does not thrive so well in the south. I believe that for money making there are many places in Wisconsin where the apple is a surer, better investment than any other business, and second to few other regions in the United States. In these views I commend to your consideration the business orchard in Wisconsin.

SWINE FOR PROFIT.

C. H. EVERETT, Beloit, Wis.

Ladies and Gentlemen:—Supt. McKerrow said to me only a little while ago that I would have to take Mr. Wylie's place on this program and discuss this subject, and be brief. I will do the best I can.

This subject of swine husbandry is one that I am interested in. I presume that you are, to a large extent. I like the business, because I have been able to make some money out of the hog, and that is what we are after.

Value of Breed.

I early discovered, too, that a well bred hog would feed at a greater profit than would one with little or

no breeding; that he was better fitted for the use that we intend to make of him, and that his powers of digestion and assimilation seem to be stronger; he made more meat from the food that we gave him, and therefore was kept at greater profit. Accordingly I have kept nothing but pure bred stock on the farm, simply because I can keep them cheaper. It costs a little more to start, but after you have started with pure bred stock, the expense is less.

I will not stop to discuss the good points of the hog in particular, because it is not necessary,—or to talk to you particularly about breeding, but more especially about the good

qualities of the brood sow and her care. I will say, however, that there are some points that we should look to.

I like a hog that resembles this one upon the chart—that is my kind of a hog—the kind that I keep; and I keep him because I like that breed better than any other. Of course we want a hog that has lots of vitality, plenty of heart room, broad and straight on the back, short legs, and well up on his feet.

Another valuable characteristic is that she should be a good milker, and this is perhaps the most valuable of all the good points of a brood sow.

Too Much Corn.

As a class I think that we feed too much corn to swine. It is the cheapest food that we produce upon the farm; we are liable to have large crops of it, and it is very convenient to shovel it over to the hogs. Men come to me looking for breeding



HOME OF C. H. EVERETT.

The Brood Sow.

Now, the kind of a brood sow that is best adapted to the farmer's use. I like matured dams to breed from, from one year up to five or six years of age. Whenever we find a sow that has the valuable characteristics of a good breeder, we keep her upon the farm as long as she continues to pay as a breeder. In the first place she should be a uniform breeder as to numbers in the litter and as to the size of the pigs. That is of very great importance; a brood sow that brings forth two pigs at a litter, and then again twelve, and they are uneven in size, has but little value.

stock, and they say, "My hogs look well—I like them first rate, but the bone is too fine. You fellows are spoiling these animals by breeding them too fine. When my hogs weigh 200 to 250 pounds, they become crippled and drag their hind parts—they can't stand up." I know at once that the man does not understand the business of hog breeding; he is not an intelligent feeder. He has not stopped to consider that the hog from birth up to whatever age he has arrived at, has been built out of what that man has given him. This fine bone, this crippled condition of the hog has been made because the foods were not

rich in bone element; because, in other words, they were fed too much corn. The food that makes plenty of fat and makes it cheap, makes heat and energy. The bone is largely made of those foods that contain protein and nitrogenous elements. You must consider that this sow is to bring forth this litter of young that are composed very largely of lean meat, and that she must be fed with that in view. To feed her corn will be very unwise feeding, because corn will not make bone or muscle, when fed to excess.

We feed our sows throughout the winter, protein food very largely, that is, considerable skim milk, which is one of the best, and wheat shorts. We feed a slop made of wheat shorts, skim milk, sometimes oats and pea meal and skim milk, and if we do not have all the milk we want, we use water; we feed whole oats, scattering them over the floor, or on the clean earth, so she will pick them up slowly and thoroughly masticate them and at the same time take exercise, which is essential to all breeding stock. We feed corn once a day, a good liberal feed. We have no fear of their becoming too fat, because we feed all the protein food they will eat. I think there is a difference between a hog in good breeding flesh, and a fat hog, so that, while we try to keep them in good flesh, they will not be too fat—the meat will be good quality. We sometimes feed clover hay, one or two feeds a week. Run it through the feed cutter, cut it fine, put it in a barrel, soak it a little while with hot water, and then add some meal and skim milk, and they eat it up clean. We feed a few roots in the winter and our sows are fed to keep them in good growing condition.

Care at Farrowing Time.

I believe that more men fall down at the farrowing period of the indus-

try than any other. We come in contact with the udder of the cow every day, because we milk her twice a day, and we very quickly know when there is cake there, and that it must be looked after; and we know, first, that we must take the food away from the cow, we must lighten up on her ration, the food that makes the milk, and we must go to work and get the cake out of that udder. But how many of us come in contact with the udder of the brood sow four or five years old that may be just as heavy a milker as this cow—the udder may frequently drag on the ground; there is a big litter, and about the only idea we seem to have is that we must hurry up and promote the flow of milk, so that the little pigs may have all they want. I have known a litter of pigs to die, simply of starvation, because no attention has been given to this matter of the caked udder and the sow has lost the udder. It will pay every one of us to give this matter attention, and to look to this udder; if she is an old sow to be very particular about it, for she may be a heavy milker, and there is just as much difference in the milking ability of two sows as there is between a heifer and an old cow. There is often more milk at that time than the little pigs can take care of, and instead of crowding her with food we should let her run for two or three, or four days. At that time it may be well to give her a drink of water slightly warm, once in a while, because of her feverish condition, but beyond that I would not feed her. Usually most of the pigs upon our farm are born in May and in September, and we turn the brood sows out into a wood lot used for that purpose; they bring forth their young, and whenever we miss one of the sows at feeding time we go up the pasture and find her, because we are interested very much, and we make sure that everything is all right, and

then we steal quietly away from her and leave her alone until she comes along with the little fellows trotting behind her; then we know she is all right, that the pigs are taking all the milk from her that they need, and she has come up for something to eat. If this cake comes to the udder and the little pigs attempt to suckle, it hurts the udder, and she jumps up and gets away from them. Again, such milk is not good for the little pigs; it is not so healthy, so we feed them very carefully at first, not all they will eat, but gradually increase the food until we get them on full feed.

The Litter of Pigs.

Then we want to teach the little pigs to eat as young as possible, so we have some little shallow troughs; sometimes we use old tin pans which the good wife has discarded, and place them where the little pigs can get under the fence and feed out of them; they come upon these pans of skim milk accidentally, and when they have tasted it they are all right. If you wait for the pigs to eat from the trough where the mother eats, they may be nearly old enough to wean before they can eat from the large trough. We keep an old broom handy, and with a pail of water these troughs may be cleaned out very quickly. After they begin to eat we crowd these pigs—give them all they will eat. Never let any animal upon the farm that you are feeding lose a pound of flesh. If you let them shrink back and lose a pound it costs two prices to put it on again.

Our Hog Pens.

One word now about the use of the hog pen, and I will stop. A great many of you may have permanent hog houses upon your farms, nice expensive hog pens, and if you have, my only advice would be to make the best use you can of them, but those of you

who anticipate building, and are thinking of building large ones, my advice would be not to do it, and I am giving that advice from the experience I have had. I know that if you are a breeder a nice hog pen is an ornament—a nice thing into which you can take prospective buyers, etc., to show off your swine, but it is not necessary to have one in order to raise just as good swine. There are some advantages in large, permanent hog houses, and some disadvantages. It is difficult to get sunshine, and you cannot get swine enough in there to warm up, and the pigs farrowed in such a pen will pile up, and if they are suckling the old sow who is a heavy milker, they become excessively fat and die with the thumps. Then, again, the floors and the soil under such pens become more or less diseased and foul, because you cannot get the sunlight in there to prevent it, and besides that, there is a great waste of fertility, besides having conditions that are not altogether healthy. Now, if you have several portable pens that you can put in the pasture in the spring, and back in your yards in the winter, and then the next year onto another pasture and plow up the old one, in that way you have conditions that are more healthy, and you get the benefit of the fertility. I find that it pays me to save that fertility and keep my swine healthy. The portable pen that I use is used by many men in this state and in many other states that I know of. I met Mr. Lovejoy, who is a large breeder of Berkshires in Winnebago Co., Ill., and he told me that he made some of these pens, and was much pleased with them, and asked me to talk to the farmers in his county about them. They are very simple to build—eight feet square, and cost about \$5. You can have a good many for \$50. Two men can lift one of them up, shove a stone boat under it, and take it wherever

you want to put it. There should be a large window light in the gable so that the sun will shine through. There should be a hole cut through the roof and some boards put over it for ventilation.

DISCUSSION.

A Member—Do you have a plank floor, or dirt floor?

Mr. Everett—We have a floor in them made out of inch stuff. We prefer these to planks because they are used for sleeping purposes, and being bedded through the winter I do not see but the floor is all right. If they were used for feeding, the plank floor would be preferable.

Mr. Arnold—I don't like that pen. If you would take it and cut two feet off the roof, and then have it arranged so as to raise the roof, then the sun will shine on the little pigs in the spring of the year. Then, in the summer time, even if you want to use that, turn that same side to the north and you have your pen well ventilated. I saw a pen at Mr. Scott's house that suits me better than that. Instead of having a hole in the roof, he has a side that swings in, so the little pigs can come out of there and get away from the dam. It will cost no more than that. You will simply have to have hinges on the inside and then you raise the roof right up, and you are not obliged to crawl through this door.

Mr. Everett—This is the simplest pen for the farmer. He is not apt to have any if there is too much work about it.

A Member—What remedy would you advise for the caked udder in the sow, besides taking away the food?

Mr. Everett—The same remedy that would apply to the dairy cow—knead it with hot water applications. A good kneading and rubbing is all I have ever done.

A Member—How about the sow eating her pigs?

Mr. Everett—I think that only comes from improper feeding. Where she has been fed too much corn and heating food, it causes her to be feverish and irritable, and then this caking of the udder makes the sow cross and she jumps up with a howl and snaps at the pigs, and gets a taste; when she gets a taste she will have more. It is quite possible that the sow that eats her pigs once will not do it again, but I cannot afford to wait a year to find out, because they are very liable to eat the second and third litters.

A Member—I have had a little experience with hogs this winter. It is somewhat of a new enterprise with me, and having had a little bad luck in the business, I want to ask for information. I have five sows that farrowed about the first of January. I was very particular and put them in a basement—a large basement, and made beds for them. Each sow did well; they had about fifty pigs and they lived along nicely and did very well until they got to be four or five weeks old; then they began to die, and they died down until finally I had only eight of them left. Then I took them away and put them out doors in another pen, and they all died but three. One of them today resembles a pig and two of them look just like ground hogs. I fed those hogs milk with bran and middlings mixed, and kept them only just in good flesh; I cared for them regularly, and could not assign any reason why the pigs should die.

Mr. Everett—I can give you my view of the case. From what you have stated I would assign the cause to lack of exercise. You fed the sows to promote a good flow of milk and no doubt successfully, but the pigs lacked exercise.

The Member—The basement was warm; they did not pile up at all;

they had a pen about ten by sixteen.

Mr. Everett—Were they excessively fat?

The Member—The pigs were fat, yes.

Mr. Thorp—Was there a floor in your basement?

The Member—Yes.

Mr. Thorp—If you had not had them on the floor they would have lived.

Mr. Everett—I don't take any stock in that. I don't believe the floor had anything to do with it, although I believe that they would have been better off on the ground than on the floor.

Mr. Convey—I wish to enter a protest against the habit some farmers have of keeping pigs in very close quarters, with low roofs; they are very apt to be damp and they get the rheumatism. I think Mr. Everett is right in regard to the death of these pigs; thumps, or fatty degeneration of the heart is due to high feeding and lack of exercise.

Supt. McKerrow—It is very evident that these pigs died from lack of exercise and too much good food.

Mr. Thorp—I do not wish to be understood that I advise keeping them in a dirty place. That is not so, but I do advise keeping them on the ground, or giving them something that is equal to dirt, because they must have dirt if they are going to be healthy. I had just that experience when I first began farming—keeping them on the floor in the pen—and they died. I never have lost one since I began keeping them on the ground. If those little fellows had had some dirt in their pen I think they would have been all right.

A Member—I find it is too damp to keep them under the barn whether they are on the floor or whether they are not; then, again, I think they had better be in too cool a place than

a place too warm. In putting them out where they have to run and exercise, they will do better than in a warm place. I think this gentleman kept his pigs where it was too damp and didn't give them exercise.

Mr. Everett—I would rather feed and care for twelve litters of pigs in the month of June than one in the month of December.

The Chairman—Mr. Thorp says to give them dirt, but I suppose he does not mean dirty dirt, he means clean dirt.

Mr. Kellogg—I have no doubt that the coming of those pigs in the winter is a great cause of their death. Two years ago last February we had three litters of pigs and we only raised one-third of them. May is the time to have your pigs.

Mr. Arnold—I want to protest against keeping the hog in a little, confined place where she has no exercise. The hog does want soil, but not filth, and the hog needs a bedroom and a place to exercise, separate; she wants plenty of exercise and sunlight. If they have sunlight, exercise, and good treatment, they will be all right.

Mr. Briggs—It is more in the type of the hog than in the breed of the hog. I do not think that Mr. Everett means to impress you that Poland hogs or Berkshire hogs are the ones you want, but early maturing types of some improved breeds.

Question—Does Mr. Everett advocate breeding the sow more than once a year?

The Chairman—I don't do it, and another thing, it is not necessary to have an expensive hog house. It is not necessary to spend \$150 to \$200 for a hog house when you can put the money, or part of it, in these other pens.