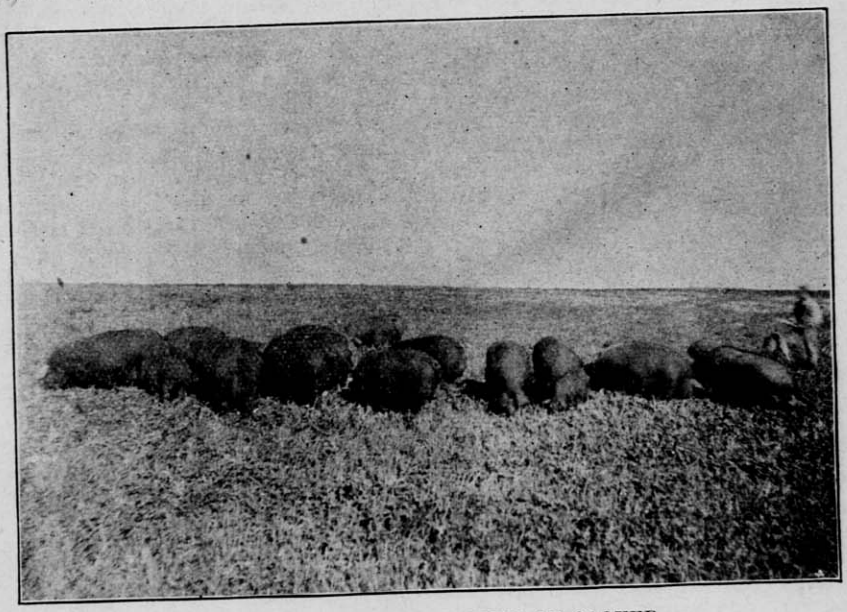
PRODUCING PORK FOR MARKET.

THOMAS CONVEY, Ridgeway, Wis.

The subject of pork making is not as thoroughly understood as it should be, although a great many points have been discovered within the past few years through the experiments of the Experiment Stations, perhaps as many at our own as at any station, though this is not classed as being a corn-producing or hog-producing region. However, many of us are very much interested in this matter, and are making an effort to keep track of such station work, and some of our pet theories have been knocked to "smithereens."



THOS. CONVEY'S BROOD SOWS ON CLOVER.

Mistaken Ideas.

For example, we have been advocating the feeding of sweet skim milk. The station work has demonstrated that the lactic fermentation in milk is no detriment to its feeding value, which was a surprise to some of us. We have also found out that it takes from about a quarter to half as much to produce a pound of additional gain in young pigs, as where older pigs are fed. For instance, you can put a pound additional weight upon a pig already weighing from thirty-eight to fifty pounds at a cost of feed of about two and a quarter pounds, whereas, you attempt to feed a four-hundred pound hog and it takes about eight to ten pounds of feed to make one pound of additional weight. They have also discovered at the stations, that where hogs are properly sheltered, that it

takes only three-quarters of the amount of feed that is required when they are not properly sheltered, although the temperature need not be so extremely low in either case.

There are many farmers who are inclined to think that hogs can be so housed as to have the highest possible temperature without regard to ventilation, and that is very largely the cause of colds, rheumatism and lung complaints, everything of that kind. This is more particularly true of young stock than of older stock. Mr. Wylie has said that he prefers inexpensive hog-pens, but he believes, as I know, in furnishing comfortable quarters; cool, dry quarters for the older stock is all right, but for young stock you need a little warmer, and you must have dry bedding.

Profitable Feeding.

Another thing that the Experiment Station has discovered, is that there is eighteen to twenty per cent. more value in feeding grain on pasture, over feeding without pasture. You cannot depend on pasture without additional feed, but the additional feed is not in the line of profitable feeding, where you depend on slops and milk, or the by-products of the dairy. You cannot make the gain that you would realize with a moderate amount of grain. You can feed about one-third of the grain ration on grass and get about as good results as you would for the full grain ration in the winter time, but if you were to neglect to feed that grain ration on the grass, your hogs would not be in condition to go on the early market, and you will receive lower prices later

Mixed Feeds for Hogs.

In regard to mixed feeds as compared with either single variety, the mixed feeds bring much better results. Oats is good in connection with corn, but it would be too expensive feeding to feed alone. Mixed feeds tend to promote a better appetite and better digestion of the feeds consumed.

Another feature in connection with pork making is that very many people, especially dairymen, might cure meats and put them on our local markets and do it very profitably. Farmers who will market their hogs in the fall at three cents a pound, will buy the same product from the city in some cases, at eleven to fifteen cents a pound. There is a good market which dairymen should take advantage of. The "picnic" hams that we hear about are simply shoulders trimmed down to resemble hams, and often shoulders from cull hogs.

The feeder who expects to make money feeding hogs, especially at low prices, must study the type of animal that will put on most flesh with a given amount of food. This is always with the blocky, thick-meated, low-down animal, having a good head, which indicates a good disposition. The by-products of the dairy, cheapen the cost of meat and produce a better quality, on healthier, better grown animals. A foul atmosphere around old pens in warm weather, particularly, is almost certain death to young pigs. Dusty feeding places are very injurious, and lack of sunshine for early pigs is very detrimental.

DISCUSSION.

Question—What kind of bedding do you use?

Mr. Convey—Oat straw. It is really the poorest class of straw that you can use for bedding, but that is what we have. We change it as often as is necessary; sometimes every two or three days, under certain climatic conditions, and it may last for a week and still keep dry.

Mr. van Loon—Is it proper to feed all they can stand and digest with your good pasture, from the beginning?

Mr. Convey—As far as the thrift of the animal is concerned, it is necessary to feed liberally. As far as getting the largest returns for the grain consumed, and all other feeding, it

will give the best results. We hear a great deal of complaint about fine-boned hogs, and the proper way to use your sow for breeding purposes. It is very much the fault of the farmers that their stock is immature and they fail to feed as liberally as they should, and when they breed from immature animals, they can't expect good results. However, I have not yet come to the conclusion that you can afford to feed them to the highest limit if you wish to keep them for breeding purposes. If you are keeping them for putting them on the market then, of course, liberal feeding only will give the best results. The larger the amount of feed you can get a healthy animal to consume, the greater the profit is, providing you have not developed an abnormal appetite.

Question—What kind of grain do you recommend feeding while they are on pasture?

Mr. Convey—I prefer soaked corn to any other grain. I am not afraid to feed liberally in connection with the by-products of the dairy.

Question—What is the propriety of housing hogs at eight or nine months old, in order to finish them for market?

Mr. Convey—I prefer to allow hogs at least a moderate range, but I have seen hogs that would take too much exercise. I have noticed in reports of experiments made at our Experiment Station, that where hogs were confined at the end of three months it takes about thirty-three and a third per cent. more feed to produce a pound increase than it did at the beginning of the experiment; in other words, the longer they are in confinement, the poorer the results were.

DAIRY HERD OF THOS. CONVEY GETTING FODDER CORN.

Question—How would you carry out this idea of curing our own meat where we have only the common facilities of the farm?

Mr. Convey—We can handle our hogs carefully; we catch and kill them as quietly as possible, butcher just as cleanly as possible, see that the meat is chilled down to the freezing point for at least twenty-four hours; then cut up and salt, being careful to get

it in nice shape, cut regularly and smoothly in every respect, cutting the ham off with a saw instead of the ax; use preferably rock salt, though you can use good, common salt, and let it stand so that the brine will escape. At the end of the week we salt again. We always like to use granulated sugar before using salt, though brown sugar will give good results. Later in the season we dry and smoke for a short time, and if we wish to hold, we pack the hams as a rule in dry salt, being careful that the hams are dry when put away, or they will take up too much salt. We usually pack the side meat and shoulders in oats that have been run through a fanning mill and are clean. Be careful to put your meat away on a dry day, because if it is damp it will accumulate moisture and mould in the oats.

Question—Do you think you can get as good results from soaked corn and grass, as you can from corn that is first ground and then soaked?

Mr. Convey—Where experiments have been conducted, the additional advantage obtained from grinding, would scarcely pay for the grinding. We soak our corn twelve hours and get very good results.

A Member—I have tried both ways and have thought that I got far better gain from the ground, soaked corn, than the expense of grinding came to.

Prof. Henry—Mr. Convey has accurately stated the results of our Station work up to date in regard to the value of ground corn. We have completed our third season's work at Madison, but the results are not worked out yet on that point. So far as we have gone we saved eight per cent. by grinding the corn, and when corn is worth twenty-five or thirty cents a bushel that saving does not pay for the trouble of grinding. If the corn was worth fifty cents a bushel, it would pay. Our work is practically backed up by work at some three other stations, but still we feel that we have not done enough work yet to get an average from. I think it is pretty largely a matter of the condition of the corn. If the corn is old and dried out thoroughly in the crib, I think such corn will not do nearly so well for the hogs as corn that is fed shortly after it is cut, and that has more moisture in it. Hard corn often injures the hogs' mouths, and they do not eat a whole ration. In that case there may be as much as twenty-five or thirty per cent. of loss, but we have no data on that point. We fed with old corn.

Mr. Wylie—Have you fed along the line of soaked corn?

Prof. Henry—No. but experiments in Iowa and Kansas with soaked corn, if I recollect rightly, showed that the soaking was about equal to grinding.

Question—Can you tell us, Mr. Convey, what difference you would make between sweet whey and fresh skim milk?

Mr. Convey—At our own Experiment Station and at others, they have come to the conclusion that whey represents about one-half of the value of skim milk; buttermilk represents about the same value as skim milk.

Question—What would you do to prevent swine from destroying their pigs at farrowing time, being in a feverish condition.

Mr. Wylie—The main thing is to see that the sow's system is kept cool by feeding cool roots and so on, that is about all there is to do.

Question—Will you explain your farrowing pens, Mr. Wylie?

Mr. Wylie—I have two farrowing pens; they are peculiarly built, and it is absolutely impossible for a mature sow to lie on the pigs. We have used the two for four years, and have never lost a pig in those pens, by being overlaid. There is a place on the floor that is hollowed out, in which the sow's body will just fit. She can only lie in one position in that pen. The principle of it is that the animal will never lie with her back down—she may lie with her head in either direction, but

always with her back uphill. There is a space at the lower side and a rail that the pigs can get under and are always in safety. The brood sow may get up and turn around, but she cannot lie on the pigs. There is a patent on it.

Question—How shall we keep down the fever at farrowing time if we don't have roots?

Mr. Wylie—You have got to have roots. In the absence of roots or anything of a laxative nature, the best thing you can do is to feed castor oil.

Supt. McKerrow—I think it would be better to feed middlings and a very little oil meal.

A Member—I have been cooking feed for my hogs about two years, and it saves me going to the mill. I cook everything. In the first place I put in two or three baskets of mangels. Then two bushel baskets of oats and a bushel and a half of rye, then two baskets of clover, and I cook that all up together and feed it to the hogs with ear corn, and I believe it is a good thing in the winter, and I don't have to cut my feed. I want to ask what the effect would be if you fed just corn and cold water to your sows.

Mr. Wylie—The tendency would be towards feverishness and drying up the milk.

The Member—I have seen my grandfather feed nothing but cold water and corn.

Mr. Convey—We had different hogs in those days.

Question—How many hours would you soak shelled corn in warm weather?

Mr. Wylie—Soak it until it is soft —twelve to twenty-four hours.

Mr. Convey—I have cooked feed for hogs for twenty-five years and I found it was lots of labor, and I got better results by feeding the grain uncooked —whole grain—than I did from whole grain cooked. Of course, warm food is good; potatoes should be cooked, but where you attempt to feed all cooked food, you will have your labor for your profit, and that is all the profit there is in it. Warm food, as I say, is all right, and it helps in the digestibility, but don't depend upon it altogether. My attention has been called to this by the work of our own Station and that of others, and my practice in handling feed is right along in the same line. We have winter roots and we cook them, the same as we do for our own table. We bring them to a boil and let them stand over until morning and feed them as a swill twice a day. Where you feed once a day you are apt to overfeed, especially with pigs.

Mr. Lovejoy—We feed our sugar beets whole, but we feed corn, oats and shorts fed together in a thick mush. We have never cooked the beets.

Mr. Convey—I consider roots among the best feed I have, but they must be very moderately fed, particularly to young stock.

Mr. Arnold—There is very much said about cleanliness among our farm animals, except pigs. I want to call attention to the fact that we never can have cleanliness with swine if we have their sleeping place connected with the feeding floor. We ought to always insist upon having our bedroom several rods from the feeding floor, and in this way we can keep the feeding floor clean. Another thing, many of us are feeding in V-shaped troughs, which should never be, in my opinion. When we cannot feed upon a clean feeding floor, we may feed in a flat-bottomed trough. With a great many there is a chute, the swill is poured in, and the large hogs get the most of it. This should not be; we should fill the trough before the hogs are allowed in, and to do this a swinging partition should be placed perpendicularly over the side of the trough on which the hogs are feeding. Then after they are filled, swing the partition away from them; then the partition hangs diagonally over the trough and the hogs cannot get into it.

Question—How would you do if you fed one hundred or a hundred and twenty hogs out of doors, and they were in different lots?

Mr. Arnold—The sleeping quarters should be seven or eight rods from the feeding quarters. There is no use of a hog pen except for sleeping quarters. I have fed two hundred hogs for three years; I had a tank and I had a chute coming in, so they came up on either side.

Question—Does cooking the whole grain make it lose any of its feeding value?

Mr. Convey—The presumption is that the protein part of the food partakes very much of the character of the boiled egg that is boiled excessively—it is not so digestible. Then, in cooking you dilute the food too much; there is too much water contained in it, in connection with the dry matter.

Question—How long will a hog do well on an exclusive corn diet, heavy feeding?

Prof. Henry—Mr. Chairman, I feel that I can answer that question, for we have kept hogs repeatedly at the University, starting with pigs shortly after weaning and feeding them exclusively upon corn with water. They did very well at first, gaining up to a hundred pounds pretty fairly. It is a surprise how long they can survive upon corn alone, but after they were about half grown, we found that they were deformed, they had not developed any frame work. They had grown in weight, but it was fat, and we found that their bones, after we killed them, were very weak—they would break at about half the strength of pigs standing beside them, which had received ashes in addition—the ashes about doubled the strength of those pigs' bones. When we fed bone meal to the pigs, they were a little stronger than when we fed ashes, but not much. The pigs which received corn only, were so fat that their jowls nearly rubbed the ground and their bellies nearly touched the ground, although the Poland-Chinas would not stand more than twelve or fourteen inches high; the corn brought about this deformity. I believe if we had fed those pigs upon wheat alone, or barley alone, that we would have had a good deal better results than with corn, but we would still have a pig which would be far from normal, either a Poland or a Berkshire. I think if a human being were kept on wheat flour alone, or on meat alone, or any one single article of diet, you would find that the person would suffer in a short time, a craving for other food. These pigs had a craving for wood ashes, and they ate the wood off their troughs. I could give you no experience with mature hogs kept only upon corn. I can say that when we fatted hogs, keeping them upon corn and ashes, we found at the end of twelve weeks that it took thirty-three per cent. more feed to make a pound of gain.

Question—Can you give us the value of skim milk fed in connection with other feed to hogs?

Prof. Henry—We have conducted nineteen experiments with skim milk, fed in various quantities, alone, and with corn meal. Our results show that five pounds of skim milk equals one pound of corn meal, or five hundred pounds of skim milk equal one hundred pounds of corn meal. We fed corn separately and got one hundred pounds of pork from five hundred pounds of corn. Then we mixed the corn and milk together, a thousand pounds of milk fed with a certain amount of corn, and found that it would make a certain amount of pork. You must have a combination. It would take sixteen hundred pounds of skim milk alone.

Question—Is the skim milk sweet or sour?

Prof. Henry—We generally have it sweet, but a number of Experiment Stations give the results reported by Mr. Convey, the general result being in favor of feeding the milk somewhat

sour. We fed the milk and the corn meal together.

Question—How would it do to feed the corn and then the milk?

Prof. Henry—That would be all right. It is a matter of comfort and convenience. If the two get together in the stomach, I suppose there is not much difference. It is certainly a waste to feed skim milk alone.

Mr. Convey—The souring referred to was lactic souring and not putrified, decayed milk; that would not do at all.

Prof. Henry—I hope no farmer will go home and say that rotten milk is as good as wholesome milk. We refer to milk that is slightly acid, about what the milk in our factories would be, the acid that we like in buttermilk that seems to be advantageous to the growing pig.

Question—Have you ever tested the value of whole, sweet milk? Occasionally in warm weather the question arises whether the farmer can afford to send his milk to the creamery.

Prof. Henry—There has been a little work done in Europe in feeding whole milk to pigs, where milk was fed alone to the pigs, and it took about eleven hundred pounds of whole milk to make one hundred pounds of pork, but it would have been much better had it been fed in connection with corn. I know of no such experiment. Generally the farmer had better let the fat go to the creamery and feed the skim milk, because a pound of fat in the milk is worth ten cents under almost all circumstances, and that pound of fat can be replaced to the pig with corn, which furnishes starch and some fat at a much less price. There might be times when we could feed it profitably to breeding or exhibition stock, but generally, as a matter of profit, it would be wiser to feed skim milk.

The Institute adjourned to 7:30 p. m.