

THE BROOD SOW.

by

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INTRODUCTION.

Everybody recognizes the hog industry as being a very important branch of animal industry in this country. Some Banker said that "The hog raises more mortgages than anything else." The brood sow is the most important animal in the hog industry since she is the pig factory and turns out the pigs which make the profit. It is by her alone that they are fed when very young and to a considerable extent up to about three months of age. It is through her that they are most economically fed.

This subject is a broad one and conveniently divides itself into four separate subheads, viz: Feeding, Selection, Breeding and Care of Brood Sow." It will therefore be treated under these subheads in this thesis in the order named.

FEEDING.--The little sow should not be allowed to stop growing after weaning but to the contrary, should be made to grow as rapidly as possible all the time. She should not be kept fat but in good flesh, nor should she be fed concentrates but to the opposite she should have a bulky food which will keep her digestive tract distended making her capable of handling a great amount of food when she gets to be a year old.

Clover or alfalfa pasture in the summer and wheat or rye pasture in winter should be provided for the brood sow all their lives. Clover and alfalfa hay are relished in the winter. About an acre per sow would be the right amount of pasture.

A very desirable grain is oats or a mixture of oats and corn ground up together make an excellent feed for young sows. Some bran and shorts mixed in the slop is very good. This keeps the young sow growing well and the slop gives bulk as does the pasture. It is poor policy to put the young sow you intend for breeding purposes in the fattening pen with the hogs intended for market. This makes her lazy and reduces her power to convert food consumed into feed for the foetus and little pigs as she has not the capacity. She will have need of a good digestive apparatus when through it she has to furnish food for eight or twelve pigs for from five to twelve weeks.

The place where the grain is fed to the sows should be dry and exceedingly clean as it is conducive to good health and pigs are clean animals if you will give them a chance to be such. The dust on the feeding floor is injurious to their lungs and by or with dust a great many disease germs are transmitted.

The sow should have plenty of clean water to drink and slop at meal time. The trough should never be allowed to become sour. It is

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a good plan to scald the trough out frequently and keep it dry between meals. It is poor policy to put in too much slop and allow it to remain over until next meal especially in the summer.

W. J. Kennedy says "give the sow with pig a fair allowance of protein for nourishment of the foetus. Oats and corn equal parts are good where you have no pasture but the sow must have exercise. In large quantities oil meal sometimes causes abortion. Mr. Kennedy gives the following as being a good ration for brood sows: two parts oats, one part corn and one part wheat. He says "with grass pasture either one of these should give good results."

The Wallace Farmer says "ergot of rye or corn that has a mould in it similar to ergot is thought to cause abortion. Also any unhealthy food causes the same trouble. It also mentions that it is ~~is~~ thought by some that sorghum hay causes abortion."

J. J. Short says "Impure water causes abortion" and gives the following as a remedy, viz: "Give a tablespoon full of fluid extract of black haw three times a day for four days."

Wood ashes, salt and sulphur should be kept where hogs of all ages can get to the mixture.

Brood sows fed corn for several generations seem to become less prolific and make poorer mothers.

Don't give the sow anything but water until the pigs empty the bag. She does not need much food for the first three days. Begin gradually with milk producing foods and increase to the requirements of the sow and pigs.

Meissner Bros. says "we would prefer a pretty thick slop made of clean water and mill feed with a little oil meal, fed twice a day with corn and a little oats for heavy feed, and the sow will farrow easily and the pigs will be active, and the man with the pig forceps

go out of business.

O. S. West says, "No iron clad rules can be laid down in regard to feeding brood sows after farrowing. The condition of the sow, the size of the litter, and tendency to suckle must be taken into consideration as well as weather and whether the sow has exercise or not."

The answers to the questions in this thesis were received by letter during April and May 1903, from prominent swine breeders of the State making them especially valuable for being of recent date.

Question.- Do you give the sows milk while the pigs are sucking? If so how much? Sweet or sour?

Answers.-

Mr. J. D. Marshall says, "I don't give the sow milk until the pigs are one month old. It is better fed sweet. I think two gallon a day is plenty. Begin with about one quart and increase gradually."

Mr. E. J. Hutley says, "Yes, when the pigs are a week old I start feeding milk and feed but a little at first and increase until she has all she wants of either sweet or sour milk."

Mr. Chas. E. Sutton says, "Always feed nursing sows sweet feed but no milk. Give the pigs milk and shorts after they are two weeks old, in a small trough where the sow cannot get at it."

Mr. G. H. Cheney says, "After pigs are two or three weeks old you can safely give a sow all the milk she will drink. Before this less amounts according to judgment of feeder. Prefer sweet milk."

Luken Brothers say, "We feed the sow and her young pigs buttermilk without scours among the pigs by commencing to feed the sow buttermilk a few weeks before farrowing. We tried this with one hundred and twenty-five pigs but if we had commenced right after farrowing

we would have no doubt have lost half the pigs. A sow should have feed she is accustomed to of any kind for several weeks after she farrows."

C. M. Garver & Son says, "We feed milk of any kind to our sows after pigs are two weeks old."

Manwaring Brothers says, "Yes, after they are two weeks old. All she wants. Prefer sweet."

MR. M. J. Williams says, "I feed my sows all the milk they will drink if I have it. I feed nothing sour."

Mr. Herman Arndt says, "Yes, about one quart milk and two quarts water. Sweet until pigs are about two weeks old and after that sour."

Newton Brothers says, "Yes, we feed milk when we have it to sows suckling litters after pigs are six or eight days old but always feed it in shorts slop, and always under all conditions to all ages of swine feed it sweet."

Question.- What grains and about how much do you give your brood sows?

Answers.-

Mr. John D. Marshall says, "After the pigs are two weeks old I get the sow on full feed with as much of a variety as I can furnish. I either let her run on alfalfa or cut and give her about what she will clean up twice a day. Give her a mixture of corn, oats and Kafir-corn fed dry. Make a thin slop, just so it will pour nicely, of bran or shorts mixed with milk or water. About a gallon is enough with the other feed. Let her have plenty of fresh water."

Mr. C. J. Huggins says, "For early spring farrow, bran, shorts and a little corn meal but with alfalfa pasture ground corn or Kafir-

corn will do. I am now feeding ground Kafir-corn with them on alfalfa pasture and they are doing fine with plenty of salt and ashes before them."

Mr. E. J. Hutley says, "Before she farrows I give her shorts slop, a little corn or Kafir-corn with either Kafir fodder or alfalfa hay. After the pigs come for the first twenty-four hours I give nothing but water. After that I start with a little shorts and water and gradually increase until I get her on full feed at the end of two weeks. I would also turn on pasture when the pigs are a few days old. I also feed a little oil meal before she farrows."

Mr. Chas. E. Sutton says, "Shorts and bran is the main feed. A small amount of corn and ground oats assist in making a variety."

Newton Brothers say, "We slop twice a day giving them all they can drink of good rich shorts mixed to order thus, viz.: Three-fifths shorts to two-fifths third grade flour with enough "Old Process" flour-meal to make it smooth. Then we feed either dry or soaked six ears of corn per day. Three at each feed night and morning after slopping."

Mr. H. W. Cheney says, "Corn, wheat shorts, and bran are the principle feeds. Can't tell amounts as they vary too much according to one thousand and one different conditions."

Mr. Herman Arndt says, "Equal parts of corn, oats and wheat chopped. About one quart twice a day until pigs are two weeks old. After this I gradually increase the grain ration by giving her one or two ears of corn twice a day or even more if litter is large and sow needs it."

Mr. C. M. Garver & Son say, "We feed about a quart of good oats at a feed with as much swill, made of shorts and bran mixed with milk or water, as sows will clean up after pigs are two or three weeks old."

Mr. J. M. Williams says, "I feed about four ears of corn at night and morning with about one-half gallon of slop, made from shorts, bran and one-fourth flax seed meal, to a sow once a day for four weeks before she is due to farrow. After she has farrowed I feed nothing for two days. I water her once the first day and twice the second day. Then I start in on one ear of corn and about one quart of skimmilk and increase it until I get her on full feed which takes eight or ten days."

Mr. J. W. Myers says, "Two-fifths rye, one-fifth corn, one-fifth oats and one-fifth bran. It is a ground mixture. Feed one gallon."

Mr. A. M. Jordan says, "Oats two parts, shorts one parts, bran one part, and corn one part. Feed according to individuality."

I don't think it is advisable to feed corn, as the only grain, to a brood sow. It does fairly well when the sows have good alfalfa pasture.

There is danger in feeding a milk producing ration previous to farrowing as milk fever is liable to set in and be very detrimental to sow and pigs. I would not think it advisable to feed any oil meal previous to farrowing on this account.

Question.- How much of the following pasture would you allow for ten brood sows? Alfalfa, clover, wheat, rye or rape?

Answers.-

Mr. John D. Marshall says, "Alfalfa is the best pasture by far for the swine of all ages. I would want not less than ten acres for ten sows and their pigs. I would mow one-half of the field every two weeks and put up the hay off of it. In this way you have nice fresh grass all the time. It makes a more vigorous growth when cut often."

Mr. E. J. Hutley says, "About an acre of alfalfa, clover, or rape will pasture ten sows with a grain ration. Wheat and rye make good fall and spring pasture but that is all. Alfalfa is best, clover second, and rape third."

Mr. Chas. E. Sutton says, "Ten acres for ten sows. Divide it into two pastures. This amount of alfalfa, rye or rape. Never tried wheat or clover."

Mr. H. W. Cheney says, "Two to four acres, for summer pasture. Alfalfa is best, clover second and rape third. For fall, winter and early spring a mixture of rye and wheat is better than either alone."

Messers J. W. Myers and W. E. Hunter say, "Alfalfa is better than any other and that requires five acres for ten sows."

Mr. Herman Arndt says, "One acre of alfalfa or clover pasture will do for from five to ten sows. These are the only kinds of pasture I ever used and I think alfalfa is the best."

C. M. Garver & Son say, "Alfalfa makes the best pasture and one acre will pasture ten sows."

Although there are quite a number who recommend one acre of alfalfa for ten sows I think it is better to have at least five acres and oftne more or have ten acres and care for it as recommended by Mr. John D. Marshall.

SELECTION.-- There is a certain part of the selection that can be done while the pig is yet small when you are looking for brood sows.

First, the little sow must of a prolific strain by being of a large family herself, showing that her dam and sire have this desirable quality. Second, by her dam and sire being of large families also and in this way showing that this prolific quality is one that is characteristic of the strain. This prolific character is a very essential one because if you do not get the pigs in a sufficient number it will not be your worth while to keep her, and then every pig added to the number in the litter is that much more increased profit.

Another character, by which you judge the pig by the dam and both grand-dams, is the milking qualities. A sow must be a good suckler for it is of little use to give birth to eight or twelve pigs when she cannot furnish milk sufficient for but half the number. Such qualities are inherited but may be made more or less intense according to the care and feeding of the sow.

An even temperament is a quality that a good brood sow must have and this is judged a great deal by her sire and dam. Of course proper treatment helps to make a sow more gentle but if both her parents are unruly you may be quite sure that at farrowing time she will become vicious even if you do give her good treatment.

Then in choosing pigs for breeding purposes the parentage and grandparentage should be examined if possible and see whether they are strong breeders by producing animals true to the type which they represent. It is of very little use to have a thoroughbred sow with a good combination of desirable points as an individual and for her to not be able to transmit these characters; for, by the pig's parents we know the pig to a great extent.

The second selection of brood sows is made just before breeding and those conforming nearest to your ideal and the type you wish to perpetuate should be chosen. At this time the sow should have a form known as "rangy", the opposite of compact, of loose and open build, yet quite broad in the back, with short neck and head, fine ears, heavy jowl-sure indication of an easy keeper- wide between the fore legs, deep sides, and heavy hams, well let down on the gambrel joints. She should be large and roomy, (in some respects rather the opposite of the boar), from healthy stock, a greedy feeder, and of great vitality as is indicated by large girth back of the fore legs, and a robust appearance generally. Coarseness is allowable in the sow, much more than in the boar, especially if she has great room for carrying large litters, with indications of being a good suckler, as is shown by having at least twelve prominent, well developed teats.

You should select and breed several more sows than the number you expect to keep for breeding purposes and these should be bred again about three months after farrowing the first time so it is possible to get two litters of pigs each year. A sow should have two trails before being condemned as she may not do well her first time but may do exceedingly well her second time. Then there will be another selection when all the sows have farrowed the second time, judging them by the type of pig which they produce, by the number each sow has, and her milking qualities. At the time these pigs are weaned only the sows coming nearest to the requirements should be bred the third time, the others being fattened and sold.

A sow should not be kept unless she gives birth to at least five excellent pigs and she should save every one if she has only five. It is far better for her to have eight or twelve. I think it is best

to have your lowest limit somewhat higher as you are introducing an undesirable quality into your herd if you keep sows that produce but few pigs. If she is very prolific but does not come up to the standard along other lines she may produce good feeders.

It is very important that you keep a record of every sow so that your selection may ~~not~~ be on merit as well as looks of the individual.

What type should a brood sow have? Following are answers given by prominent breeders of the State:

Mr. Chas. E. Sutton says, "The typical brood sow should be long and roomy, with as much thickness as can be obtained, her face should be well dished (Berkshire), good width between the eyes and ears- the latter of good size- her back should be very strong and slightly arched, ribs well sprung, tail set well up, strong and deep through the heart and flank, straight under line, her legs should show plenty of bone and well set apart with one on each corner of the body. The pastern should be short and strong and she should stand well upon her toes. Always select a sow with a kind disposition."

Mr. C. J. Huggins says, "Brood sow should have good length of body, broad back a little arched, should be well developed in the hind quarters, not too rangy or too low down, with good limbs and feet, body should be rather deep, good heart girth, not too long in neck, head rather small, small thin ears nicely breaking at the tips, nice bright eyes, good width between eyes, good thick coat of smooth hair, not less than twelve teats, a quiet disposition and a hearty eater."

Mr. H. W. Cheney says, "She should possess the characteristics of the breed and be motherly and quiet in her disposition, long and roomy and if somewhat coarser than the male it will not hurt."

Mr. Hernam Arndt says, "She should have good length of body,

not too closely coupled over her loins so she will be roomy, broad in forehead, and full eyed as she must be an intelligent animal, she should also be broad over the hips to ensure easy delivery of her young and should have at least twelve teats, well placed if possible."

Mr. E. J. Hutley says, "A brood sow should have a long body with deep sides, ribs well sprung, good back, should stand well on her toes, wide hams and shoulders, short nose, broad between the eyes, with a good disposition, should be of a large litter, should have not less than ten teats."

Mr. John D. Marshall says, "The type should be a large roomy sow, with great length, well sprung ribs, nicely arched back, and good feet and legs."

Newton Brothers say, "We prefer a good length with plenty of depth, high arched back, and don't be too particular in regard to ear and head."

While these answers come from breeders of three different breeds of swine the type of brood sow is practically the same in each.

Question.- At what age would you make your selection?

Answers.-

Newton Brothers say, "From the time the pig is weaned up. It requires more judgment in selecting when a pig."

Mr. H. W. Cheney says, "Select a plenty very young, while sucking the dam and later cut out such as do not develop properly."

Messrs Chas. E. Sutton, W. E. Hunter, A. M. Jordon, Manwaring Brothers, and J. W. Bean say, "About eight months of age is the proper time to select a brood sow."

Mr. J. C. Huggins says, "Select at four weeks old and then keep an eye on them until old enough to wean."

Messers J. W. Myers and John D. Marshall say, "One year is best age at which to make your selection."

I think the idea of selecting from a young pig up is best as suggested by Newton Brothers, Mr. H. W. Cheney and Mr. C. J. Huggins.

Question.- How many pigs would you rather a sow would have?

Answers.-

Mr. John D. Marshall says, "Eight pigs are as many as a sow can grow and make fine hogs of them at an early age. I discard every sow which does not farrow at least seven pigs after the first litter. One of the most prolific sows I ever owned had only four pigs the first litter. After that she never farrowed less than nine at one litter and as many as thirteen. Often the first litter is small."

Mr. J. M. Williams says, "For young sows first and second litter the number should be no less than six or eight. Older ones eight to ten. Ten is a plenty for any sow but I have them now that have eleven. It is almost impossible to feed and get a sow to hold her flesh when she has over eight pigs but my best brood sows are from large litters."

Newton Brothers say, "She should farrow from six to twenty pigs but unless an unusual suckler she should not be allowed to carry over eight or ten."

Mr. C. J. Huggins says, "Eight to twelve, and eight are enough for any sow to raise well with good care."

Mr. H. W. Cheney says, "Ten for a fully developed sow. Six or eight for her first litter."

Mr. E. J. Hutley says, "Eight to ten for an old sow and six or seven for a young sow."

Messers J. W. Bean, W. E. Hunter, J. W. Myers, and A. M. Jordan say that they prefer eight pigs to litter.

Luken Brothers prefer "eight to ten". Chas. E. Sutton, "eight to twelve." Manwaring Brothers, "nine to ten." Herman Arndt, "prefer nine"

Any where from eight to twelve pigs if the sow is able to care for them is about the number she should have.

Question.- What is the least number you would keep a sow for?

Answers.-

Newton Brothers say, "All depends upon how profitable she has previously been. Always give a young sow two chances at least."

Mr. C. J. Huggins says, "Unless a very valuable sow not less than six pigs."

Mr. John D. Marshall says, "If a sow does not grow six on an average I discard her."

Mr. J. M. Williams says, "I want a gilt to have ~~no~~ less than six pigs. Should she have less than six the first time and I liked her breeding I should breed her for a second litter and if she did no better she would go the fattening pen."

Mr. H. W. Cheney says, "Five, but one trial will not suffice to discard a sow for sometimes they bring three at one litter and ten at the next."

Messers W. E. Hunter and Chas. E. Sutton say, "Four is the least number they would keep a sow for."

Messers J. W. Myers, A. M. Jordan, Luken Brothers and E. J. Hutley say, "five". Herman Arndt says, "six." While Manwaring Brothers say, "seven."

Question.- What is the largest number you would let run with a sow?

Answers.-

Newton Brothers say, "If her udder is sound and every pouch is

down and gives a good flow, we would, if sow was in good condition and large, let her carry one pig for each test."

Mr. J. M. Williams says, "An old sow say two years old must raise eight to ten pigs unless she has met with some accident but I mean she must farrow eight to ten good healthy pigs. I have a gilt now that was thirteen months old when she farrowed. She is out of a litter of twelve and I breed her to a young boar which was out of a litter of eleven. That many was raised. This gilt had thirteen and I had to kill three as I did not want her to raise but ten. Now understand me ten is too many for a young sow for her first litter. If she is not well fed she will be stunted and never get her growth."

Mr. H. W. Cheney says, "All she has teats to accomodate."

Mr. J. D. Marshall says, "I would not let more than ten pigs run with a sow. Would prefer eight."

Mr. E. J. Hutley says, "That depends upon the sow. All she can care for good."

Mr. C. J. Huggins says, "A young sow six to eight. An old sow eight to twelve."

Luken Brothers say, "Eight in winter and twelve in summer."

Mr. J. W. Myers says, "All she will have."

Messers A. M. Jordan and W. E. Hunter say, "Eight."

Messers Chas. E. Sutton, Herman Arndt and Manwaring Brothers say, "Twelve."

BREEDING.-- I would not advise breeding a sow until she is ten months or preferably a year old because if she gives birth to pigs when she is from nine to twelve months old she has not developed and so she has a double part to play, i.e. that of feeding a litter of pigs and also maturing herself and she is not able to do but one at a time so neither one is well done and you have as a result a poor specimen of a sow and weak pigs. This is discouraging because as a pig she was worth considerable money and now she is comparatively worthless.

It is especially true that a sow should not be put to the boar until twelve months if she is a thoroughbred as she will not mature well and will not show herself true to the type and this is very essential when you are raising thoroughbreds to be sold for breeding purposes as it is by the dam and sire largely that the pigs are sold.

The boar to which the young sow is put should be one of the best representatives of his type. He should not be allowed to serve the sow but once as it is hard on him to give her several services and she is just as likely to have twelve pigs with one service as with three. It is best to breed the sow so that the pigs will come the latter part of March or the first part of April. Sows carry their pigs from one hundred to one hundred and fifteen days.

Feed well for a couple of weeks previous to breeding the sow and make nature think plenty of food will be given to feed a large litter and you stand a better show to get it. A sow poorly fed at the time of breeding will likely produce a small litter.

Question.- How old should a sow be before she is bred?

Answers.-

Mr. H. W. Cheney says, "Breed her so that she will become a mother at about one year of age."

Mr. J. D. Marshall says, "She should never be bred until she is one year old."

Mr. C. J. Huggins says, "Should not be bred younger than nine months and twelve is better."

Newton Brothers say, "Twelve months always if you desire a good growthy useful sow."

Mr. Chas. E. Sutton says, "Nine to twelve months, according to developement, not under 250 pounds. This is for best results."

Mr. E. J. Hutley, and C. M. Garver & Son say, "Not before she is eight months old."

Mr. J. M. Williams says, "I never breed a sow until she is eight months old but ten is better."

Mr. A. M. Jordan says, "Eight to twelve months."

Mr. Herman Arndt says, "Ten to twelve months."

Mr. J. W. Bean says, "Nine months."

Messers J. W. Myers, W. E. Hunter, Luken Brothers and Manwaring Brothers say, "One year."

Question.-How old should a sow be before you quit using her for breeding purposes?

Answers.-

Mr. H. W. Cheney says, "If a very good one keep her in business as long as she continues good work. Usually five or six years. If not successful discard at any age."

Mr. Chas. E. Sutton says, "I am using nine to ten year old sows successfully. The mature sow is the one to tie to."

Mr. John D. Marshall says, "I have had sows raise nine to ten pigs and raise them nicely at ten years old, and as fine litters as they ever raised. My rule is to keep a good sow as long as she lives. Eight or ten years is as long as they generally live for me."

Newton Brothers say, "There is no age where one can give up a brood sow so long as she is a good suckler and prolific gentle mother."

Mr. J. M. Williams says, "I have kept them until they were eight years old. I always keep a sow as long as she raises a good litter of pigs. No less than six."

C. M. Garver & Son say, "A sow should be kept just as long as she is careful of her litter."

Mr. C. J. Huggins says, "Keep her as long as she will breed and suckle well. I have kept until seven years old."

Mr. E. J. Hutley says, "Keep her as long as she produces good litters and cares for them."

Manwaring Brothers say, "Use her just as long as she raises profitable litters."

Mr. Herman Arndt says, "Six to eight years or when she quits careing for her young properly."

CARE.--The pig should be so cared for that she may be the largest possible size at weaning time which is according to circumstances from five to ten weeks of age. Some pigs are more mature at five weeks than others are at eight weeks. If pigs are fed grain properly they will not suffer much when weaned. The weaning should be done as gradually as circumstances will permit as much for the benefit of the sow as for that received by the pigs.

As a result of removing the pigs suddenly a sow may get caked bag and a fever. This is very injurious to her especially if you desire to use her as a brood sow in the future. The best care possible for a brood sow is none too good because if you do have a good breed and a good strain of that breed and she receives poor care, her good blood stands for little.

Some wean pigs by putting the sows upon a feeding floor and letting the pigs go up to them at will and during this time feed the pigs well with oats and give good pasture and soon they cease going to the sow altogether.

Sometimes when the pigs are properly fed they will wean themselves and this is very desirable if it is because they do not need the milk of the sow but if it is because the sow is a poor milker it is very poor policy to keep any of her offsprings for brood sows as a good milker is one of the most essential points of a brood sow.

At all times during the sow's life she should have a good dry place for sleeping quarters. It should be warm in winter and cool in summer.

Above all things do not allow your sow, after being bred, to run in the pen with fattening hogs. Also keep them away from horses, mules and cattle (especially if you are fattening the cattle). It is best to let them run out by themselves so there will be no danger of

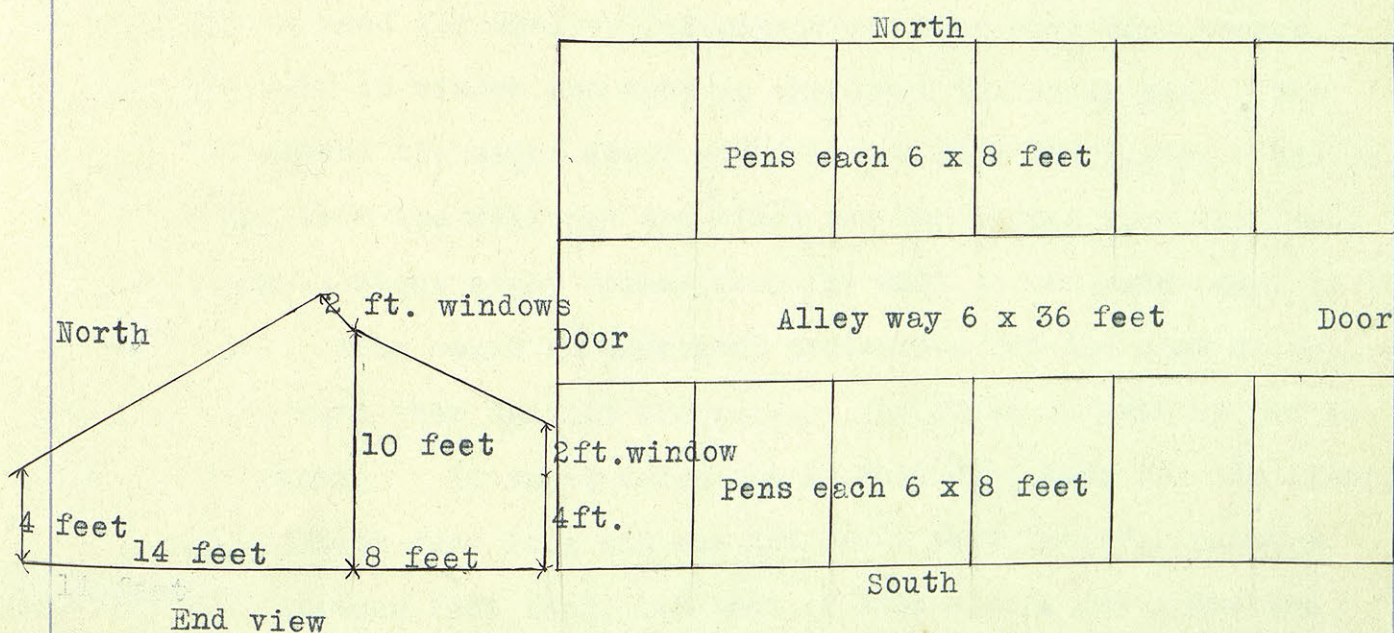
them being hurt and so they will get plenty of exercise. Injury may cause abortion and so the sow must not be injured in any way.

The sow should have a good place to sleep and a shelter from the storms. As the time for farrowing approaches the sow should be shut up during the night in a pen to herself but may be allowed to run on pasture during the day. When you expect her to farrow she should be shut up all the time so you can keep watch of her and render any assistance necessary.

After the sow has farrowed you should remove and bury the after birth at once as eating this is thought by some to be the cause of her eating her young. If she is well fed with proper food she will seldom eat her young.

A forkful of bright straw should be put into the farrowing pen a few days before farrowing.

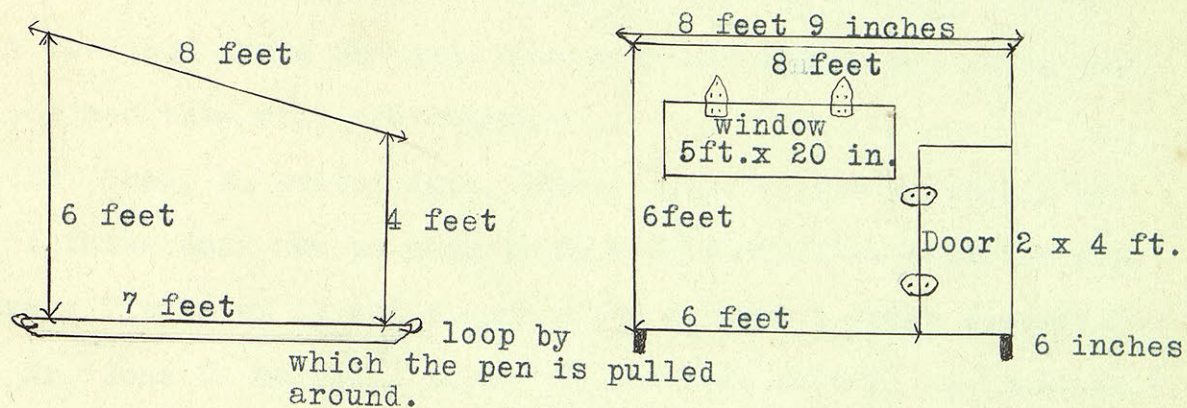
The following is a very good plan for farrowing pens if you prefer a number under the same roof. It is twenty-two feet north and south and thirty-six east and west.



The windows on south side are so placed that the little pigs

can be in the sunshine in the south pens and the windows are so placed in the roof that the pigs in the north pens can get sunshine. Each pen has a gate opening into the alley. In each pen there is a rail around as a protection for the pigs. It is placed about eight inches from the floor and six inches from the wall.

The following is a front and end view of the separate farrowing pen used by the Kansas State Agricultural College.



These pens are very convenient and can be moved around wherever you wish them as they are on 2 x 6 runners and are not very heavy. They may be used for shelter for pigs after they have been weaned. They are warm in winter and make an excellent farrowing pen. Two 2 x 4 run around the sides about eight inches from the floor. One is two inches from the wall and the other one two inches from the first one making it about eight inches from the wall to the outer edge of the outer one. This makes an excellent protection for the pigs so the sow cannot mash them against the wall. The floor is made of 2x6 so as to be strong. It takes seven 2x6 sixteen feet long for the floor, one 2x6 fourteen feet long and one 2x6 seven feet long for runners. Eight 2x4 sixteen feet long, 143 feet of drop siding for sides and ends. Seventy feet of roofing boards for the roof and ten laths

eight feet long to put over the cracks in the roof. At present prices the lumber in this pen would cost \$10.75 which is not very expensive and there are advantages in having separate pens as one sow does not disturb another.

Question.- Do you have any trouble with your sows rooting in the pasture? If so, how do you remedy it?

Answers.-

Mr. J. E. Hutley says, "To keep sows from rooting I give them all the wood ashes and salt they want and always put it in the same place and they will root there."

Mr. Chas. E. Sutton says, "Never owned a rooting sow in my life. I think corn has as much to do with rooting as anything else. I feed very little of it and always allow my sows a large pasture."

Mr. John D. Marshall says, "If the sows root in the pasture I take them out for a few days as this will usually stop the rooting. I think the cause, of rooting generally, is allowing the growth to get woody so they don't relish it. Keep a part of the field mowed down so they will always have tender grass. Never ring or cut their noses."

Newton Brothers say, "We have very little trouble from rooting. If hogs are kept in proper condition they root but little. We use rings if necessary."

Mr. C. J. Huggins says, "Yes, but put a stop to that quick by putting two rings in large hog's nose and one in shoats. Little pigs do no damage."

Mr. Herman Arndt says, "Have but very little trouble with hogs rooting but when they do root I use hog rings."

Mr. J. M. Williams says, "No, I claim that if you give your

sows or swine of any kind plenty of salt they will not root."

C. M. Garver & Son say, "Our sows always root some when the ground is soft and wet but we let them alone as we dislike to ring brood sows."

Mr. A. M. Jordan says, "Only allow on pasture a few hours daily. Ring them as a last resort."

Mr. J. W. Myers says, "Feed them wood ashes, lime and salt."

Mr. H. W. Cheney says, "I don't remedy it. Rings and cutters partially stop it but mutilate the animal."

I think where sows or hogs of any kind are properly fed they will not root. Ashes or some grit seem to be craved by hogs and should be supplied to them as well as salt.

Question.- What style of farrowing pen would you recommend, give dimensions?

Answers.-

Mr. Herman Arndt says, "I prefer single houses with dirt floors. It should be seven by seven inside. There should be an outside pen of same size with plank or cement floor for feeding."

Mr. H. W. Cheney says, "I prefer pens, six by twelve feet, with railing around nine inches high for pigs to crawl under for safety. One that is high and dry with means for obtaining all the sunlight possible and as good ventilation as possible without draughts."

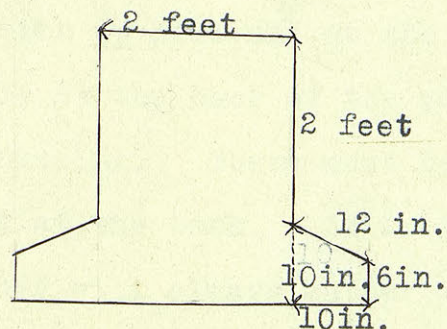
C. M. Garver & Son say, "We prefer a hog house with farrowing pens with six by ten feet with an out pen six by sixteen feet with plank floor."

Mr. E. J. Hutley says, "I prefer the large hog house as it can be built cheaper and made warmer than the small one. The pen should be eight by nine feet, with guard rail one foot from floor. There

should be a pen outside in which to feed and water the sow."

Mr. J. W. Bean says, "I use pens six feet wide and fourteen feet long, a number of them placed side by side. Eight feet of the rear part is roofed with soft boards and the back is all made very tight. The front six feet is open to the sunlight and divided by tight gates so hung that they can swing either way so that they can be made to close up the roof part in case of rain or snow. I make the floor sloping to the south and toward the trough which is made V-shaped of two eight inch planks placed between the partition posts and resting on the floor. When the pigs are two or three weeks old the partition gates are removed and the floor is used in common for feeding upon."

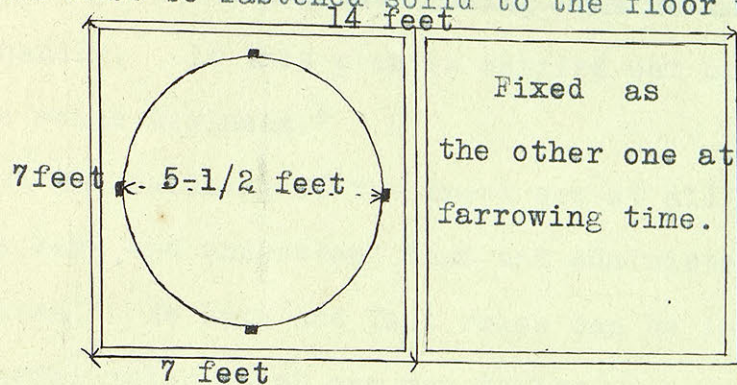
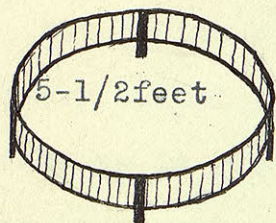
Newton Brothers say, "We use and fully recommend what is known as the "Trones Farrowing Pen". It is protected by a government patent. It is seven feet two inches long, two feet wide where the sow stays with a pocket ten inches wide running entirely around the pen. The pen is thirty-four inches high and built on the following plan:"



At each end (behind and in front of sow) there is a drop board that clears the floor ten inches leaving a ten inch pocket entirely around the sow."

Mr. Chas. E. Sutton says, "My pens are seven by seven and make them in pairs seven by fourteen. There is a six inch safety board eight inches from the floor around the wall of pen as a protection for the pigs after the sow has farrowed. At the time of farrowing the sow is enclosed in the center with stout corn-crib slatting held by

four 2x4's. This is removed after the sow has farrowed and may be used for another. This must be fastened solid to the floor while in the pen."



Mr. John D. Marshall says, "The pens should be made of fencing boards as wire will get loose on a small pen and is not satisfactory. For large lots or pastures wire netting is the best fence. The farrowing pen should be eight by eight feet for large sows. It should face the south so that the sun can shine in nicely. It should be floored with a slope of one inch to the foot, or in an eight foot pen, the front should be eight inches higher than the back. Put a 2x6 around the back and two sides. On the back of the pen put your 2x6 out one foot from the wall, then put a 1x12 between that and the wall. The object of the sloping floor is that the sow will always lay with her back up hill and as the pigs come they will slip down under the boards at the back of the pen and are right at the teats ready to begin nursing. There must be a nice bed of straw or hay under this board at the back. It is impossible for the sow to lay on her pigs as they will always gather up under these boards at the low edge of the pen. I have never had a sow lay on a pig in such a pen. Always fix a corner of the pen or lot so as to feed the pigs separate from the dams. It will only be three or four weeks until every little pig will gather around the trough at feeding time. Give them a little slop made of shorts and water. After they are through eating clean

out the trough so that it will be sweet and clean for the next feed. Always rub and scratch some of the pigs at feeding time so they will be quiet and nice to handle. If this plan is carried out one may be sure of success in the swine business."

Put brains with the handling of the brood sow at all times. Study every animal you have and understand them and administer to each ones needs as is required. No hard and fast rules can be laid down but there are some general rules which one may follow.