Lessons For Pig Club Members

By

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Lessons For Pig Club Members

LESSON I
Naming the Parts

The first thing the club member must learn in studying hogs is to name the different parts of their bodies. In the picture given below, each part is numbered. Study the diagram so that you will know all the parts without having to refer to the diagram.

Figure 1—Points of the hog

11. Toes 17. Fore flank

When you think you have learned the names of all the parts, try to name them on your own pig.

LESSON II.
Judging Hogs

The purpose of swine judging is to learn how to select an animal which will be the best for the purpose you have in mind. There are certain things which indicate that an animal will sell well when marketed, that it will gain in weight economically, and if used for breeding purposes will transmit these characteristics to its offspring. These things all go together to make up a good hog.
The Score Card is merely a guide for making a detailed study of the animal. The values assigned to the various points indicate their relative importance. Study the card carefully and try to learn it by heart.

**Score Card for Six-months' Gilt**

The score card may be used for scoring a boar pig by making the following changes and additions for points 11 and 12; for belly and flanks, change to read, "broad full, neat;" for rump and hams, add "testicles medium in size, uniformly developed, symmetrically carried."
**LESSONS FOR PIG CLUB MEMBERS**

<table>
<thead>
<tr>
<th>Scale of Points</th>
<th>Standard</th>
<th>Student’s Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Size: large for her age (a daily grain of 1 1/4 pounds from birth)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>2. Head: Wide between the eyes; face moderately dished, medium in length, refined; typical of breed</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3. Eyes: large, prominent, clear</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4. Ears: medium size, strong knuckles; not course; typical of the breed</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>5. Neck: full, slightly arched, medium length; free from creases; blending smoothly with the shoulders</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6. Jowl: full firm, smooth, neat; not flabby, coarse or wrinkled</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7. Shoulders: compact, smooth, deep, blending smoothly with the back and sides</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>8. Chest or Heart Girth: deep, full, large girth; wide at the base</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>9. Back and Loin: strong, evenly arched; high, square-sprung ribs; fairly wide and uniform width; smooth, mellow covering</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>10. Sides: long, deep, straight with shoulders and hams; smooth, free from creases and wrinkles</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>11. Belly and Flanks: belly broad, full, neat, teats prominent, numerous, symmetrically placed; flanks low and full</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>Total 100</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Try scoring some pigs until you are familiar with all the parts and know their relative values on the score card.

Questions
1. What parts are awarded the two highest scores on the card?
2. Name in order the six parts receiving the highest scores.
3. What is the total score awarded to these parts.

LESSON 3
How to Judge

In judging any hog it is necessary to have a system in order that the judging may be done quickly and yet thoroughly. The kind of system you use is not so important as really to have one and to use it.

After you have worked with the score card a few times stop using it and do your judging by comparison. All judging in the show ring is done by comparing the animals. The score card shows you where to look for the various points and is the first step in judging.

If you are going to judge by comparison do not get too close to the animals. Stand off 15 feet or more and use the following system of looking over them.

Stand in front; look for
- Width of back
- Width of loin
- Width of shoulders
- Smoothness of shoulders (top)
- Smoothness of shoulders (side)
- Smoothness of junction of neck and shoulders
- Width of head
- Length of head
- Shape and set of ears
- Width between the eyes
- Straightness of legs

Move to left side; look for
- Arched back
- Straight belly line
- Smoothness of body
- Depth of chest
- Trimness of Jowl
Length of rump
Width of ham
Depth of ham
Size of bone
Straightness of legs
Length of legs

Move to rear; look for
Width of body
Width of hind quarters and hams
Depth of hams
Fullness of hind quarters and hams
Straightness of legs

By following this method you soon will be able to go over each animal quickly and still not miss any points. Go over each animal this way and then decide how they should be placed. If you are in doubt about two that seem equally good, look at one and then at the other and go over them point by point.

Look in the farm and breed papers that come to your home and try to fix in your mind the pictures of the best animals of your breed. When you are judging place first the one that comes nearest to what you think an animal of that age and breed should be. Then place the others according to how near they approach this type.

Questions
1. Why should we have a system in judging?
2. What do you see from the front?
3. What do you see from the side?
4. What do you see from the rear?
5. What might you see from the side that would be objectionable? The front? The rear?

LESSON 4
Breed Type and Characteristics

It is impossible to give an adequate description of all breeds within the short scope of this bulletin. The club members are therefore advised to refer to Farmers Bulletin 1263, entitled "Breeds of Swine," which can be obtained free from the U. S. Department of Agriculture, Washington, D. C., and to their respective breed papers, whose articles and pictures can be used as excellent texts for such instruction.
Questions
1. Where did your breed of pigs originate?
2. Describe a good representative of the breed you own.
3. Name some of the most prominent breeders of your breed in the United States. In Montana.
4. What is the name of the association in which you register your pigs?
5. What is the name and address of the secretary of this association?

LESSON 5
Principles of Feeding

A pig may be compared to the electric lighting plants found on many farms and ranches. In these plants gasoline and air are mixed and the mixture exploded by a spark in the cylinder of the engine. This explosion develops heat and power. As the wheels start moving most of the power developed is needed to move the machinery but when it moves at a higher rate of speed a surplus is developed which is stored in the batteries as electricity to be used when needed. But all this machinery would not run long if oil were not used to lubricate it and air and water to cool it.

The pig takes in food instead of gasoline and this food is used to keep it warm and furnish the power necessary to keep its body working properly and for it to move about. If there is more than the pig needs for these purposes the surplus is stored in the body of the pig. Like the lighting plant the pig uses air and water to keep itself cool and for other purposes.

The pig differs from the lighting plant in that it has the power to make its own repairs, and in that its feed contains not only materials which furnish heat and power but also the things which make it grow, the lubricants it needs, and the spark to keep it going.

Classes of Foods

The body of the pig is largely made up of bone, muscle (lean meat) and fat. If we are to grow and fatten our pigs properly we must furnish the materials which the pig can use to make these, for each must be built of different materials.

The materials which are needed by the pig to grow, fatten and keep healthy are proteins, carbohydrates, fats, minerals, and vitamins.

The proteins are the materials which the pig uses to build its muscles. For this reason we will call them “muscle builders.”
If there are any of these materials left after the pig has had all it needs for building muscle, it can use them for building fat.

The carbohydrates are largely sugars and starches which the pig uses for keeping itself warm and furnishing it with power to keep its body working properly and to move about. If there are some of these materials left after these needs are met, the pig uses them to build fat. For this reason we can call them "fat builders." They can not be used to build muscle and bone.

Fats are used for the same purpose and so we will include them in the term fat builders.

Just as oil lubricates the engine and permits it to run smoothly, so do the minerals lubricate the body. In addition they build up the bones and so they can be called "bone builders."

The vitamins seem to be the "spark" which keeps the pig in good health. They also help it to grow. We can call them "health givers" if we wish.

**Muscle Builders**

Animals that are young and growing need to build up their muscles. For this they need to have feeds that are strong in muscle builders. Some of the feeds are strongest in muscle builders, and about the proportion of these materials that they contain, are:

<table>
<thead>
<tr>
<th>Feed</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tankage</td>
<td>40 to 60%</td>
</tr>
<tr>
<td>Linseed oil meal</td>
<td>30%</td>
</tr>
<tr>
<td>Alfalfa leaves</td>
<td>17%</td>
</tr>
<tr>
<td>Shorts</td>
<td>13%</td>
</tr>
<tr>
<td>Bran</td>
<td>12%</td>
</tr>
<tr>
<td>Oats</td>
<td>10%</td>
</tr>
<tr>
<td>Skim milk</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Bone Builders**

They must also have feeds that will build up good strong bones. Some of our best feeds for this, and about the proportion of these materials that they contain, are:

<table>
<thead>
<tr>
<th>Feed</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tankage</td>
<td>15 to 24%</td>
</tr>
<tr>
<td>Alfalfa leaves</td>
<td>9%</td>
</tr>
<tr>
<td>Linseed oil meal</td>
<td>6%</td>
</tr>
<tr>
<td>Oats</td>
<td>4%</td>
</tr>
<tr>
<td>Skim milk</td>
<td>1%</td>
</tr>
</tbody>
</table>
Although skim milk stands at the bottom of both these lists, due to the small amount of these materials it contains, it really ranks at or close to the top because it is largely water. If we were to remove the water we would find that what remains is very strong in these substances.

**Fat Builders**

Pigs that have built up good strong bones and muscles are then ready to put on fat. Some of the best fattening feeds, and about the proportion of fat building materials that they contain, are:

<table>
<thead>
<tr>
<th>Feed</th>
<th>Fat Building Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>82%</td>
</tr>
<tr>
<td>Wheat</td>
<td>82%</td>
</tr>
<tr>
<td>Rye</td>
<td>81%</td>
</tr>
<tr>
<td>Barley</td>
<td>80%</td>
</tr>
</tbody>
</table>

We do not have a means of measuring the amount of health builders in our feeds but we do know that nice alfalfa leaves contain many of them and that most of the other feeds are lacking in one or more of them.*

You may notice that the feeds that build bones and muscles are not the ones that make fat. A pig that is growing needs muscle builders, bone builders and fat builders, but needs the muscle and bone builders most. After he has grown up pretty well he will not need such a high proportion of the bone and muscle builders and will need more of the fat builders.

Some feeds such as bran and oats are bulky while feeds like corn and wheat are not. This bulk is caused by what is called crude fiber. The pigs cannot digest such materials as does a horse or cow, and if there is very much of it in the feed it will not let the pigs gain as fast as they would if it were not there. There are some feeds we can use with good results in spite of the fact that they contain considerable amounts of crude fiber. Some of the feeds that contain considerable amounts of it, and about the amounts they contain, are as follows:

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*The above information relative to the contents of the various feeds is intended as a general guide only and should not be taken as the exact value of the feeds in actual practice. In the percentage the nearest whole numbers have been used.*
Alfalfa leaves* 13%
Oats 11%
Bran 10%

The grains are our principle feeds. They are usually strong in fat builders and weak in muscle builders. To make a satisfactory ration we usually feed something with them to supply the muscle builders. This we call a supplement. Many times it also supplies necessary bone and health builders.

Questions
1. What do we call the main classes of materials in the pig's food?
2. What is each one used for?
3. Can the muscle builders make fat?
4. Can the fat builders make muscle or bone?
5. Name three feeds containing a large amount of muscle builders. Bone builders. Fat builders.
6. What kinds of materials does a young pig need more than an older pig?
7. What is a supplement?

LESSON 6
Feeding Grains

Our grains are usually hard. The pigs will not chew some of them enough to crack them and so are not able to digest them. If we crack or soak them for the pigs they will be all right. Corn is a little better if ground or soaked, but not enough better to pay for the trouble unless it is quite hard. Wheat, rye, barley, and oats, or other small grains, should always be soaked or ground. They are better ground than soaked, but soaking is better than feeding dry.

Corn is our best fattening feed. It is our strongest grain in fat builders, but is very weak in muscle and bone builders. For that reason it should be fed with a supplement that is strong in muscle and bone builders. Yellow corn seems to have enough health builders but white corn does not have as much and we must supply them in our supplement. Corn is very well liked by pigs of all sizes. The little pigs especially like to crack and eat it. It does not usually need to be ground or crushed.

*Alfalfa leaves are mentioned in these tables rather than the hay, because the pigs seldom eat anything but the leaves and a few of the finer stems. The leaves contain about two-thirds of the feeding value of the hay.
Barley is strong in fat builders and has nearly enough muscle and bone builders. It seems to be lacking in one of the most necessary health builders. A supplement that contains these three kinds of materials should be fed with it. Our best Montana barleys, such as the blue hulless variety, are about equal to corn for fattening. The hulled varieties are worth about 92 per cent as much as the hulless. Pigs do not like barley quite as well as corn but it is an excellent feed for them.

Wheat is strong in fat builders, but is weak in muscle, bone and health builders. It should be fed with a supplement that is strong in the things it lacks. It often makes a sticky dough or paste in the pig’s mouth and so should be fed mixed with other grains, or as a slop. It should be cracked rather than ground fine. Its fattening value is equal to or slightly better than that of corn.

Rye is strong in fat builders but weak in muscle, bone and health builders. Like the other grains it should be fed with a supplement that is strong in these materials. Pigs do not like it very well and so do not eat as much of it every day as they do of the grains they like better. As a result they gain more slowly. It is worth about as much as hulless barley.

Oats are well balanced in fat, muscle, and bone builders. The hull contains a considerable amount of crude fiber and so oats are not so good for fattening as are the other grains. They are especially good for brood sows, which can use more bulk than fattening pigs. They are not good for very small pigs unless the hulls are sifted out. They are then excellent. The hulls hurt the intestines of the pigs when they are small. Oats are excellent for pigs weighing 50 pounds or more when you want to make them grow rather than fatten. They should not make up over one-third or one-half of the ration for fattening hogs.

Beans are strong in muscle builders and good in bone and fat builders. They are lacking in one of the most important health builders. If fed alone they will produce a soft, flabby fat that the butchers do not like. When corn is fed with them the rate of gain is increased and less feed is needed to produce a pound of pork. Beans are best when cooked. A little salt should be added to the water when cooking.
Potatoes are very weak in muscle and bone builders but are strong in fat builders. The amount of one of the most essential health builders they contain varies somewhat but as they are strong in some of the others they can be considered fair in this respect. They contain a large amount of water and are somewhat bulky but the pigs do well on them if properly fed. They should be cooked and most of the water drained off before they are fed. When four pounds of potatoes are cooked and fed with one pound of grain, you will get about the same gains as though you had fed two pounds of grain.

Beans and potatoes are the only two feeds that it pays to cook.

As a rule we can figure that it will take from 4 to 4 1/2 pounds of grain and dry supplement to produce each pound of pork on a pig that is fed in the dry lot from weaning time to a market weight of 200 pounds.

Questions
1. Should oats, barley and wheat be ground? Corn?
2. Is soaking better than grinding?
4. Is oats a good fattening feed?
5. What is corn weak in?
6. Would you feed a supplement with barley or wheat?
7. What kind of pigs are oats best for?
8. If you were fattening pigs on oats and corn what proportion would you feed of each?
9. Do different varieties of barley have different feeding values?
10. How do potatoes compare with corn for fattening?

LESSON 7

Feeding Supplements

Skim Milk is our best supplement for growing or fattening pigs. It is very strong in muscle and bone builders. It is very well liked. It can be fed sweet or sour, but must not be fed sweet one day and sour the next. About 3 pounds (3 pints) of milk to every pound of grain is about the right proportion. Amounts less than these can be used to good advantage. It is lacking in one of the most important health builders and so some alfalfa leaves should be fed with it.

Tankage is a by-product from the slaughter houses and one of our best supplements. It is very strong in muscle and bone builders and is very well liked by pigs. It is weak in health
builders. It is usually expensive. Tankage made in Montana is worth about twice as much as grain. It usually contains about 40 per cent muscle builders. Sixty per cent tankage is worth about three times as much as a pound of grain. It is usually best when it makes up about 10 per cent of the ration. Ninety pounds of grain and 10 pounds of tankage makes a good mixture.

Linseed oil meal makes a sticky paste in the pig's mouth unless it is fed in a slop and well stirred. It is strong in muscle and bone builders, but not so good as tankage or skim milk. It is weak in health builders. Use about one-half more of it than you would of tankage. Only a very small amount of it should be fed to brood sows that are carrying pigs. It is slightly laxative.

Bran is a common feed for hogs. It is not as strong as the three supplements just mentioned in muscle builders. It is strong in all the bone builders except the most important one, which lessens its value considerably for this purpose. It is not strong in fat builders and lacks one of the most important health builders. It has much crude fiber in it and so is not good for fattening. It has a slightly laxative effect and is excellent for brood sows. Too much of it is often fed to little pigs. They should have only a very small amount, if any. It should not form over 10 per cent of the grain ration of fattening pigs.

Wheat middlings or shorts make a very good supplement when a good grade can be obtained. When there is much finely ground bran in them they are not much better than bran. When they can be purchased reasonably cheap they can make up about one-third of the ration for fattening. They contain about the same kinds of feeding materials as bran except that they do not have so much crude fiber and are not so laxative. When a good grade of them can be obtained they are excellent to make into a slop for little pigs.

Alfalfa hay is a home grown, inexpensive feed that makes an excellent supplement for brood sows in the winter. It is strong in muscle, bone, and health building materials. It should be fed

*Pigs have the ability to store up a reserve of health builders and if they have been on good pasture during the summer they will sometimes get fat and be shipped to market before we note the effects of a lack of these materials. This is made possible by drawing on their reserve supply.
uncut on dry ground or in a rack. The sows should not be expected to clean up the stems. If they will eat the leaves they will have gotten about two-thirds of the feeding value out of it. Give them all they want.

For fattening pigs it is a good supplement but not so good as some of the others. This is because it contains too much crude fiber. When other supplements are hard to get or are high in price it will be profitable to use nice leafy hay. Let the pigs eat all they want if it.

Sweet clover hay has about the same properties as alfalfa if it is nice and leafy.

The following prices per hundred pounds of the various supplements show about what can be paid for them when corn or wheat is worth $1.00 per hundred pounds.

<table>
<thead>
<tr>
<th>Supplement</th>
<th>Value per 100 pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skim milk</td>
<td>$.25</td>
</tr>
<tr>
<td>Tankage 60% protein</td>
<td>$2.50 to $3.00</td>
</tr>
<tr>
<td>Tankage 40% protein</td>
<td>$1.60 to $2.00</td>
</tr>
<tr>
<td>Linseed oil meal</td>
<td>$1.80</td>
</tr>
<tr>
<td>Bran</td>
<td>$.90</td>
</tr>
<tr>
<td>Shorts</td>
<td>$1.07</td>
</tr>
</tbody>
</table>

Questions

1. What is our best supplement?
2. How much tankage would you feed with 90 pounds of corn?

*Courtesy Kansas Agricultural Experiment Station.
3. If corn is worth $1.50 per hundred pounds what is 40% tankage worth?
4. How many pounds of skim milk would you feed with 4 pounds of barley?
5. Why should linseed oil meal be fed in a slop?
6. Should it be fed in large amounts to brood sows?
7. Is bran as strong in muscle builders as tankage?
8. Is it much good for fattening?
9. How much shorts would you use in a ration?
10. What class of hogs is bran very good for?
11. What advantages do alfalfa and sweet clover hay have over the other supplements?

LESSON 8
In the Feed Lot

In feeding pigs we must be careful not to overfeed or underfeed. How much we feed will depend upon what we want to do with them. If we are growing them out on pasture to fatten in the fall we want to feed lightly; if we are feeding pure bred stock we want to grow them out well but not to fatten them; and if we are trying to fatten them, we want to feed heavily. Each will take a different kind of a ration and must be fed differently.

In general it may be said that a pig that is being fed for show, or being fattened, should have about all it will clean up in about thirty minutes after feeding. Never give them so much that there is feed left in the trough the next time you go to feed them, unless you are using a self feeder.

If you are feeding the grain dry see that the pigs have plenty of fresh water. In the winter time the pigs will keep healthier if the water is warmed enough so that the chill is removed. Pigs in the winter very often do not take enough water to keep them healthy.

Feeding the grains mixed with water or skim milk to form a slop about as thick as good thick cream is a good method, especially in the winter if the slop is warm. In this way the pigs get all the water that they need.

Feeding should be done regularly. The pigs get hungry about a certain time every day and if they do not get something to eat at meal time they become restless and do not gain nearly so well. Regular feeding pays.
Quietness is also essential in feeding pigs. When you are around the pigs move quietly and disturb them as little as possible. Do not make quick movements which are liable to frighten the animals. The person who moves quietly about them soon comes to be recognized as a friend. Pigs that have been handled in this manner will do much better than those that are frightened every time any one comes near. For a sow to be unafraid of you is especially valuable at farrowing time when you may want to be in the pen with her while the pigs are being born, or are very young.

Shade is an essential for pigs in the summer time. If natural shade is not available arrange some brush or boards so that the pigs can lie in the shade all day. They should not be forced to stay in a small hog house during hot weather in order to get the benefit of the shade, unless the sides are up so that the wind can blow through and keep it cool.

When they are warm the pigs like to lie in water or on wet, cool ground in order to keep cool. If a small, shallow stream is available for them to cool off in, they will enjoy it very much.

Pigs are supposed to be very dirty creatures but if given a chance they will keep quite clean. No animal or person could keep clean in the places where some pigs are kept. They like clean, fresh water and should not be made to drink from filthy pools in the barnyard. This is not only cruel but is often the cause of considerable sickness.

Many pigs fail to do well because they are kept in small pens where they cannot get enough exercise to keep them healthy. Exercise is very essential for little pigs and breeding stock. Even pigs that are being fattened need a liberal amount of it in order to keep in good health and to keep up a good appetite.

Questions
1. How long should a pig be given to clean up its feed?
2. Should we feed enough so that there will be some feed left in the trough when the next feeding time comes?
3. Why is it good to feed a slop in the winter? How thick should it be?
4. Why is it best to be quiet around pigs?
5. What should we do to help the pigs keep cool in summer?
6. Why should we provide clean water?
During the winter, brood sows should be well sheltered and well fed. What kind of shelter the sow has makes little difference providing it is warm, dry and gets some sunlight.

Sows do not need to be kept in a heated barn, but if their quarters can be reasonably warm the sows will be more comfortable. They will do better in a cold barn than one that has no ventilation and that is stuffy and full of bad air. They need shelter from the wind more than they do from the cold.

They should have a dry bed to lie on and plenty of dry bedding should be supplied to them. If they are forced to lie on cold, damp places they are liable to become afflicted with rheumatism and pneumonia. A good deep litter of straw in a dry place out of the wind makes a good place for them. If the sunlight can reach it so much the better, for sunlight is nature's great disinfectant.

If many sows are kept together at this time of the year they are liable to pile up on each other, due to the cold weather, and injuries and deaths sometimes result. They should be split into smaller bunches of six to eight sows in order to avoid piling up.

When the weather is cold the sows do not care much for water that is ice-cold. In fact they will drink so little of it that sometimes they get sick. Much sickness among hogs in winter would be prevented if they would drink more water. They will drink warm water if you will give it to them. It should not be hot, but just lukewarm or with the chill taken off. Feeding your grain in the form of a slop made with warm water is an excellent way of getting them to drink more. If you are not feeding much grain the slops can be made rather thin.

Leafy, pea-green alfalfa or sweet clover hay is one of the best winter feeds for brood sows that we have. The sows can eat a whole lot more roughage than can small or fattening pigs. But even the old sows cannot get along well without some grain. They should have about two to five pounds of grain a day in addition to the hay, the exact amount depending on the size and condition of the sow.

Don't try to have your sows fat when they farrow. They
should be in good thrifty condition, but neither fat nor thin. Fat sows often have trouble in farrowing and thin sows have weak pigs or are unable to nurse their pigs properly after they are born. Feed your sows during the winter all the hay they want and just enough grain so that they will be in moderate condition in the spring.

The sows will handle a pretty bulky ration and can use more hay, oats, and other feeds containing a rather large amount of crude fiber than can fattening pigs. Oats alone, especially if ground form a good ration for the brood sows. Usually a mixture of grain is fed and can be mixed almost any way.

Corn is too heating to be fed alone to brood sows and does not contain the muscle and bone builders which they need to build up the little pigs they are carrying. Barley is better to feed alone than corn, but it is a little too heating and fattening for best results. Wheat is too fattening for feeding alone and rye is much the same. Any of these feeds can be used to good advantage either alone or mixed together if a good supplement is fed. Oats are good to feed alone or to mix with any of the other grains.

Any good supplement will go well with the above grains in providing a good ration for the brood sow. Skim milk and alfalfa or sweet clover hay are our best supplements to feed with our grains in wintering brood sows.

Questions
1. Why should the sows have a dry place to sleep?
2. Should we have large bunches of sows together?
3. How can we get the sows to drink more water?
4. What is one of our best winter feeds? Should we feed it alone?
5. Should we try to make the sows fat?
6. What can you tell about corn for wintering brood sows? Barley? Wheat?

LESSON 10
Care of Sow at Farrowing

As the farrowing season approaches some preparation should be made for it. If the sow has been getting a good deal of grain the amount should be decreased a week or ten days before the day on which the pigs are expected. It is well to replace quite a little of the grain with bran, especially during the last two or three days before farrowing. The bran helps to put the sow in
good condition for farrowing, as it has a cooling effect on the system and is slightly laxative.

The sow should be placed in a pen that is dry and clean. It should also be well lighted. Only a small amount of straw should be provided for the bed. When a large amount is provided the pigs are often crushed in it when the sow lies down.

A pen 6 x 8 feet or 8 x 8 feet is large enough for farrowing. A six-inch plank (or a 2 x 4 placed so that its outer edge is six inches from the wall) should be placed around the walls of the pen with the lower edge six inches from the floor. These planks form a guard rail so that when the sow lies down she will not crush the pigs against the wall. The sow is held out from the wall by the plank and any pigs that may have been between her and the wall are protected by the plank.

Figure 3. Guard rails protect small pigs from being crushed against the wall.

Before farrowing the sow should be handled and petted enough so that she has no fear of you. If she is well accustomed to having you around before farrowing she will not usually be disturbed by your being in the pen with her when she is farrowing, or later.
A day or two before she farrows the sow will usually gather the straw up into a nest. About twenty-four hours before farrowing the milk will appear in the teats.

While the sow is farrowing it is always well to be around in case help is needed. If all goes well you may not need to be in the pen. If it does not you may be able to save the lives of one or more pigs and possibly that of the sow.

When the pigs come they are not always strong enough to clear away the membrane from around their nostrils. This membrane should be cleared away and if the pig does not breathe, blowing down its throat or pressing gently on its sides will sometimes help to start it. The cord should be broken, leaving six inches or more of it attached to the pig’s body. The pig should then be wiped dry with a cloth, especially if the weather is cold.

If the sow strains for some time without giving birth to a pig it is usually well to investigate the trouble. The pigs usually come head first with the nose between the front feet. Occasionally one comes hind feet first. Sometimes one or both feet are bent back. In such cases it is necessary to straighten the feet out. Wash the hands in a solution containing a small amount of some disinfectant, trim the finger nails close and insert the hand with the tips of the first and fourth fingers under the second and third, and the thumb close underneath. Be careful not to tear any of the delicate membranes as this might cause blood poisoning later. Slip the hand in when the sow is not straining and try to locate the pig. If it is not in a proper position gently push it back and try to arrange it so that is will be. If this can be done successfully it will usually be born without further trouble.

Sometimes the pig is presented properly, but the sow cannot force it out. In such a case a pair of forceps or a wire will be necessary to pull them out. If a small string can be slipped around the front feet it is better than the wire. If the string cannot be used and you have no forceps make a hook out of a piece of heavy stiff wire. One end should be a handle while the other should be bent to form a small hook and this should be filed sharp. Dip it in the disinfectant solution and then insert it with one finger over the hook to avoid tearing the membranes of the sow. Slip the hook upward into the V of the lower jaw and when it has caught pull on it as the sow strains. Do not
pull when she does not strain. As the pig moves, pull outward and slightly sideways toward the sow's feet. Do not be in a hurry to pull a pig. Be absolutely positive that the pig will not be born unless you pull it. Some pigs live after being pulled with a wire, but many of them die. However, it is better to lose one or two this way than to lose the sow and a number of unborn pigs.

After the pigs are born they should each have a fill of milk. There is nothing that will give them a better start than this. The stronger ones can be trusted to obtain it themselves, but the weaker ones may have to be helped a little.

If the weather is very cold they can be put in a box bedded with old sacks and covered over with another one. If this is done they should be removed to suckle every couple of hours.

After the pigs are born the sow will need but little feed for a day or so. Some lukewarm water will be all she will need for the first twelve hours. Later she can be given a thin slop made up of mostly bran. Nice, leafy alfalfa hay is also good. About the third day grain feeding should begin. Bring her back to full feed gradually. If you feed too much grain at first she is apt to develop udder trouble because she will produce more milk than the little pigs can use. About ten days to two weeks after the pigs are born she should be back on full feed.

At times sows eat their pigs when small. In most cases this is due to poor feeding before the pigs are born. The trouble is that the sow's ration does not contain the muscle and bone builders she needs to build up the bodies of the little pigs she is carrying. As a result she eats the first thing she can get hold of that will give her what she needs, and it may happen to be one of her own pigs.

The membranes which come with the little pigs are called the afterbirth. Sometime the sows eat this and then take to eating the pigs. The afterbirth should always be removed from the pen.

Questions
1. What should be done to prepare for farrowing?
2. How much bedding should the sow have?
3. How can you tell that she is going to farrow?
4. Why should the sow be handled before farrowing?
5. What would you do in case the sow was having trouble in farrowing?
LESSONS FOR PIG CLUB MEMBERS

6. What feed should the sow have before and after the pigs are born?
7. Why do some sows eat their pigs?
8. How can we avoid most of this trouble.

LESSON 11
Care of the Sow and Litter

The feed of the sow after farrowing should be regulated according to the condition of the pigs. If the pigs are becoming thin and do not seem to get enough milk the sow should receive more feed. If they are very fat and show puffs of fat around the neck the ration for the sow should be reduced.

Sows that are heavy milkers are liable to give too much milk for the pigs if heavily fed while the pigs are very small, and the pigs themselves are apt to develop scours and thumps.

Thumps is a disease which usually attacks the fattest pigs in the litter. There is not much hope of curing pigs that get it, but the trouble can be prevented. If a clean nest, plenty of sunshine and exercise is provided for the little pigs they will seldom have the thumps. If you have them in a small pen arrange the doors so that the pigs can get out after they are about a week old. By getting out and running around they will get the exercise they need. If they will not take exercise by themselves force them to take it by driving them around.

When the pigs get to be a month old the sow will need to be heavily fed so as to provide plenty of milk for the pigs. Her ration should be strong in muscle and bone builders. Skim milk is excellent for the sow at this time. Liberal quantities of alfalfa or sweet clover hay should be fed if skim milk is not available. The grains are too weak in muscle and bone builders to be fed alone at this time. Barley and oats are the best grains if no supplement can be secured.

A pair of sharp little teeth are found on each side of the little pigs mouth. These teeth are very sharp and are liable to cause trouble to the sow's teats when the little pigs get to fighting for them. Take a small pair of pliers and break them off. Don't pull them out, break them off. Often they cause no trouble but it is better to break them off than to take any chances with trouble.

When the pigs are a couple of weeks old they will begin to
be interested in other feeds than their mother’s milk. A little whole wheat or corn scattered around in the litter on the floor will help to provide exercise and will be greatly enjoyed by the little fellows. They love to crack and eat whole corn when they are small. There is less need of grinding feed for little pigs than for larger ones.

At the age of three or four weeks they should be given a place to eat by themselves. A small pen with a doorway small enough to keep out the sow and large enough for the pigs to pass through is a good place to feed them. A ration of grain and skim milk is very good. About 8 pounds of grain and one pound of tankage, or equal parts by weight of grain and white middlings, are also good rations. While small they need more muscle and bone builders than they will later on.

If desired, a self feeder can be put in the pen. If the pigs are accustomed to being well fed before they are weaned they will hardly notice the change when they are weaned and will keep on gaining steadily.

Before they are weaned the boar pigs should be castrated if they are not to be raised for breeding stock. Some morning when it is cool but pleasant, catch the pig with as little running as possible. With a sharp knife cut through the outer and inner skin of the scrotum into the testicle itself. If the cut on the inner membrane has been made sufficiently long the testicle can be pulled out several inches. A couple of cords and blood vessels connect the testicle to the body. Reach as far up these as possible and scrape them with the knife until they are worn through. By scraping instead of cutting you avoid having the pig lose much blood. Be sure you cut low on the scrotum for if you do not blood and dirt are liable to gather in the pocket you left and cause sickness. If you cut low the blood will all drain out and there will be no trouble. Before making the cut the knife should be dipped in a disinfectant solution and after the testicle has been removed the cut should be washed with it.

Pigs that are castrated before they are weaned are not much affected by the operation and will usually continue to gain after a day or two.
LESSONS FOR PIG CLUB MEMBERS

Questions
1. How should the feed of the sow be regulated?
2. How can thumps be prevented?
3. What should be done with the sharp little tusks in the pigs’ mouth?
4. When should we start to feed the little pigs?
5. Why should the pigs be fed before weaning?
6. When should the boar pigs be castrated?
7. How is this done?

LESSON 12.
After Weaning

At eight to ten weeks of age the pigs may be weaned. This is best done by removing the sow from them, thus leaving them in familiar quarters where they will not fret as much as they would if removed to a strange place. Another good method is to remove one or two of the largest pigs at a time, thus leaving the smaller pigs with the sow a little longer. Where but one litter a year is raised the pigs may be left with the sow until she weans them herself.

At weaning time the feed of the sow should be reduced to stop the milk flow. Should the udders fill with milk after the pigs are removed it is better to remove most of the milk by hand than to return the pigs to the sow. Pigs that have been well fed before weaning will scarcely notice the weaning process.

If the sow is to be bred again within a short time she should be fed grain necessary to bring her back into good condition. If she is not to be bred again soon, good pasture will be about all she will need. If pasture is not available give her all the alfalfa or sweet clover hay she will eat and from two to five pounds of grain a day depending on her condition.

Raising Pure Bred Pigs

Good care should be taken of the pure bred pigs intended for breeding stock. In raising them we must remember that the object is not to fatten them but to grow them well. They should carry only enough fat to make them appear smooth and thrifty.

As soon as they are weaned they should be put on pasture if it is available. Here they should receive some grain. A pound a day will probably be enough at weaning time and this should be increased as necessary until they are getting four to five pounds a day when they weigh 100 to 125 pounds. If a supple-
ment such as tankage, skim milk, or shorts is available it should be fed with the grain.

At first the grain should consist largely of corn, wheat, barley, or rye, or a mixture of them. As the pigs grow a small amount of oats should be introduced into the ration. This amount should be increased until by the time the pigs weigh 75 to 100 pounds the entire grain feed may consist of oats.

If pasture is not available the grains should be fed in about the same manner except that oats should be mixed into the ration a little earlier. Here the need for a good supplement will be greater than on pasture and a larger amount of it must be used. Every effort must be made to build up the bones and muscles of the growing pig and it is the supplements which furnish most of these materials.

In order to do well the pigs must have a clean well bedded place to sleep and plenty of shade and fresh water.

Questions

1. What should be done with the sow at weaning?
2. What should be done with purebred pigs if you have pasture for them?
3. How should you feed them if you did not have pasture?
4. What kind of feeds do they need?
5. Should they be fattened?
6. What must we do for our pigs in addition to feeding them?

Lesson 13
Fattening Pigs

There are two general methods of fattening pigs. The first is in the "dry lot," which may be any kind of a pen or lot that contains no pasture. The second is on pasture.

Pigs that are kept in a dry lot to fatten should be heavily fed from the start. If they are kept through the summer on a small grain ration and then fattened after harvest, more grain will be needed to fatten them than if they were heavily fed from the start. If not enough grain is available to feed them heavily all summer long pasture should be provided for them.

It takes more grain to fatten a pig in the dry lot than it does on pasture and pigs kept in the dry lot are usually not as healthy as those kept on pasture.

A good pasture provides a natural, good, and cheap supple-
ment to the grain used, reduces the amount of grain needed to fatten a pig, and pigs will usually be healthier on it than they will be in the dry lot.

Figure 4. Good pastures help make good pigs.

The pasture to be used will vary with the local conditions. Alfalfa, red clover, rape, sweet clover, and grain pasture (wheat, barley, oats, and rye) will probably rank in about the order named for Montana conditions. Where it can be successfully grown there is no better pasture than alfalfa. Red clover and rape are almost as good but can be successfully grown in but few parts of the state. Sweet clover is good and can be grown to some extent in almost every part of the state. The grasses are good while green but lose their value for pigs when they become dry. The grain pastures are very good but lose their value as a pasture crop when they begin to head out and mature.* This usually occurs at the time when they are most needed for pasture. Winter rye sown in the spring will not do this and is the most satisfactory grain pasture.

Pigs that are on pasture should receive some grain every day. How much this should be will depend to some extent on the grain available. If it is desired to fatten them rapidly and the grain is available a self feeder may be used to good advantage or the pigs may be fed by hand all the grain they will eat.

*The difference between using grain crops as pastures and for "hogging off" should be noted.
If it is desired to carry the pigs along on a small amount of grain until harvest season they can be fed from one-half to one pound of grain a day apiece. This small amount of grain will help to keep them in thrifty condition. Their gains on pasture will be small but they will do well on a full feed later.

The more we feed our pigs on pasture the more grain they will need to get to a market weight but they will gain faster and get to market earlier.

Getting the pigs to market earlier often pays well for the extra grain used. The early fall markets usually pay higher prices per pound than the later markets. The average price for 20 years (1903 to 1922, inclusive) at Chicago by months show this:

<table>
<thead>
<tr>
<th>Month</th>
<th>Price per Pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>8.40</td>
</tr>
<tr>
<td>February</td>
<td>8.77</td>
</tr>
<tr>
<td>March</td>
<td>9.40</td>
</tr>
<tr>
<td>April</td>
<td>9.50</td>
</tr>
<tr>
<td>May</td>
<td>9.39</td>
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<tr>
<td>June</td>
<td>9.28</td>
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<tr>
<td>July</td>
<td>9.51</td>
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<tr>
<td>August</td>
<td>9.51</td>
</tr>
<tr>
<td>September</td>
<td>9.56</td>
</tr>
<tr>
<td>October</td>
<td>8.97</td>
</tr>
<tr>
<td>November</td>
<td>8.45</td>
</tr>
<tr>
<td>December</td>
<td>8.20**</td>
</tr>
</tbody>
</table>

When on full feed pigs will eat from three to six per cent of their body weight every day. The smaller they are the more they will eat in proportion to their body weight.

### Hogging-off Crops

Whenever we have a crop standing in the field and turn the pigs in to harvest it we say that we are "hogging-off" that crop. This method saves us the cost of harvesting.

Small grain crops are seldom hogged off. Usually these crops can be used to better advantage by harvesting them and then feeding the grain. As stated before, these grains need to be ground or soaked before feeding and the pigs do not make as good gains on them in the field as they should. If small grains are to be hogged off the softer and beardless varieties should be used.

### Hogging-off Corn

Corn is often hogged off to good advantage. By hogging off the cost of harvesting is saved. Unlike small grains the pigs will make as good use of the corn in the field as they will if it is

*Courtesy of Chicago Daily Drovers' Journal, Chicago, Ill.*
harvested and then fed to them. They will also eat many weed seeds.

Where corn is to be hogged off the pigs should not have the run of the whole field at once. A temporary fence should be erected that will give the pigs feed enough for ten days. At the end of this time a new area should be fenced off and the pigs moved to it. They should not be expected to clean up every kernel of corn. After they have gone over the field turn the brood sows in and let them have the rest.

It must be remembered that while the pigs are in the corn field they need some supplement. An alfalfa or sweet clover pasture near the corn field is excellent for them. If pasture is not available alfalfa or sweet clover hay can be put in a rack and placed in the field for them. If other good supplements are available they may be substituted for the hay.

Questions

1. What are the two general methods of pork production?
2. What are our best hog pastures?
3. Is there an advantage in fattening the pigs quickly?
   A disadvantage?
4. What is the best way of fattening them quickly on pasture?
5. What is a dry lot?
6. Do pigs raised in the dry lot use less or more grain to make a pound of gain than those on pasture?
7. Is it usually profitable to hog off small grains?
8. How should we hog off corn?

LESSON 14
Houses

Regardless of the kind of house to be built for the pigs there are certain conditions that all of them must fulfill to be successful. They must be warm, dry, well ventilated, durable, reasonable in cost, and admit the largest possible amount of sunshine. Sunshine to early spring pigs is almost as necessary as feed and is one of the most important things to consider in building a house for their use.

Community Houses

Houses may be divided into two classes, the large community houses with several pens, and the small, individual houses suitable for one sow and her litter.
There are several different types of community houses. A type that has proven very popular in the middle western states is called the half monitor. (See figure 5). This house has pens on both sides of an alley. It extends east and west. Sunshine is admitted to the pens on the south side of the house through windows in the south wall. It reaches the north pens through windows in the roof.

Although this type of house has been very popular in other sections it is not well adapted to Montana conditions. In the spring the snow and ice lie much longer on the north side of the house in Montana than in the corn belt. As a result the outside yards that should be dry and warm so as to encourage the pigs to exercise in them remain cold and wet. The inside pens are also affected and are inclined to be cool and damp. For these reasons the small pigs do not take as much exercise as they should

*The height of the windows is influenced by the average date of farrowing, the width of the pens, etc. If you do not have tables that will accurately determine the height for you write the Montana Experiment Station, Bozeman, Mont., stating about what date you expect to have your sows farrow and the width of the pens and the alley.
and do not thrive so well in the north pens as when in those on the other side of the alley.

A shed roof house (See figure 6), can be built to extend east and west and still be satisfactory. In this house the alley is on the north side of the house. A single row of pens are on the south side. Sunshine is admitted through windows in the south wall. This house is easy to build and is quite satisfactory under our conditions.

![Diagram of a shed roof house]

**Figure 6.** A shed roof type of house, one row of pens on South side and an alley running on the North side.

Probably the best community house for Montana conditions where the snow fall is not extremely heavy is one similar to the Iowa Sunlit Hog House shown in Figure 7. This house extends north and south with pens on both sides of the alley. Windows in the roof admit sunlight for several hours during the day to each pen. The outside pens receive equal amounts of sunshine and are about equally dry. The windows can be protected from hail by fine meshed wire screens, or specially built board covers can be placed over them during the hail season. A few of these houses
are in use in the state and seem to be very satisfactory.

The floors of the pens should be made of hard packed earth, wood, or of concrete overlaid by wood. The alley floor can be of earth or concrete. A concrete foundation for the walls is best.

The pens should be 6 by 8 or 8 by 8 feet.

These community houses are most satisfactory when used in combination with individual houses. The pigs are farrowed in the community houses and when 10 days to three weeks of age are moved to the individual houses. By this method a smaller community house can be used to farrow a given number of sows and the expense is thus reduced.

**Individual Houses**

When there are but few sows on the farm the farrowing can be done satisfactorily in individual houses.

One of the best types is shown in Figure 8. The house can be used with or without the window sash shown in the picture. Considerably more warmth is obtained in the early spring when it is used. This house is set on skids and can be moved.

Another good type of house is shown in Figure 9. This house is less expensive to build and has no floor. A door on the

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*Figure 7. Iowa Sunlit Hog House. View showing windows in roof open.*

*Courtesy Iowa Experiment Station.*
Figure 8. Iowa Gable roof House, showing roof doors open and window sash in place.

side can be opened to admit sunshine on pleasant days. A door set on hinges should be used in front under our conditions. When banked with straw or manure to keep out the wind this type is quite satisfactory. As this house has no floor it should be set on high ground so that water will not drain into it. It, too, is set on skids and can be moved as desired.

A lantern hung in either of these individual houses during cold nights will help to keep them warm and make the pigs more comfortable.

Questions
1. What type of community house is best for Montana conditions?
2. What kind of a floor would you use in it?
3. Should a man have community and individual houses on the same farm?
4. Which type of individual house do you prefer? Why?
5. Under your conditions, would you build a community house?

*Courtesy Iowa Experiment Station.
LESSON 15  
Equipment

The equipment needed will vary with the number of hogs to be cared for and the local conditions. A discussion of pieces of equipment that will prove useful on most Montana farms where hogs are raised follows.

Self Feeder

Self feeders are very useful either in the dry lot or on pasture when it is desired to have the pigs on full feed. They save much labor in feeding for it is only necessary to fill them every few days. They should be looked at every day to make sure that they are not clogged. They also save feed and make the pigs gain faster, for pigs on a self feeder will gain faster and use less feed to produce a pound of pork than those that are hand fed.

They are usually arranged so that the amount of feed flowing...
out can be regulated. This also permit shelled corn and grain
ground to various degrees of fineness to be used in the same
feeder. Where a supplement such as tankage is being fed it is
best to put in compartments or else to feed it in another self
feeder. When the pigs can choose their feed from such feeds as
corn and tankage they will balance their rations better than we
can do it for them.

A small self feeder capable of supplying feed for 15 pigs is
shown in Figure 10. It is valuable for feeding small lots of pigs
out doors in the summer time and indoors in the winter. Another
self feeder which feeds to both sides is shown in Figure 11. This
feeder will furnish feed enough for 40 pigs.**

*Figure 10. A small self feeder in operation.

*Courtesy Wisconsin Agricultural Experiment Station.
**Plans for building these self feeders can be secured by writing the
Figure 11. A large self feeder in use.

Figure 12. Good type of alfalfa rack but larger than necessary.

*Courtesy Wisconsin Agricultural Experiment Station.
Alfalfa Rack

A good type of alfalfa rack is shown in Figure 12. The size of rack should be in proportion to the number of pigs to feed at it. For feeding indoors a small rack may be built against the wall. All racks should have the slats about three inches apart.

![Figure 13. Plan of barrel waterer.](image)

Barrel Waterer

The supplying of water to the pigs is often a source of considerable trouble on Montana farms. A simple and satisfactory waterer that will supply the pigs with a constant supply of water during the summer is shown in Figure 13. This type of waterer can be made at home with very little expense.

To fill it the bottom is plugged and water poured in through the top hole. When filled it can be hauled to the desired place. The top hole is then stoppered so that no air can get in and the plug removed from the bottom. The water will then maintain a constant level in the water tight compartment around the bottom of the barrel.

*Courtesy Iowa Experiment Station.*
Figure 14. A good type of light hurdle 24-inches at top, 28-inches high and 48-inches at bottom.

Hurdle

A small hurdle is often very handy in moving and showing pigs. (Figure 14). It can be made out of light boards in any size desired. The end of a packing box with a hole cut in the top for the hand makes a satisfactory hurdle for every-day use. For showing, the hurdle may be painted and bear the owner’s name and address. The hurdle should be about two and one-half to three feet wide and two to two and one-half feet high.

Questions
1. What are the advantages of a self feeder?
2. Under what conditions is its use advisable?
3. When can we use an alfalfa rack to good advantage?
4. Under what conditions is it advisable to build a barrel waterer?
5. Of what advantage is a hand hurdle?

LESSON 16
Diseases and Parasites

The best remedy for hog diseases is to prevent them.

In Montana it is probable that more pigs are lost from thumps than any other disease. Thumps usually attack the fattest pigs in the litter when they are small. The pigs do not want to move
around much and a quick heaving or thumping in the rear flank shows that the pig has the disease. A teaspoonful of castor oil may be of some help but even then most of the sick pigs will die.

Thumps are easily prevented. Don’t feed the sow heavily enough to get the pigs extremely fat, make the little fellows take plenty of exercise and allow them to get plenty of sunshine and the thumps will not cause any losses.

Cholera is a disease that is not found as much in Montana as in many other states. When the pigs get cholera they lose their appetite, vomit, show a reddening of the eyes, and very often have the scours. They become feverish, cough occasionally and often show purplish blotches on the skin around the flank, belly and ears. They usually want to hide away and after a short time sway from one side to the other as they walk.

If you think your pigs have the cholera secure a veterinarian at once. If you have cholera in the herd unless you get a veterinarian right away the whole herd may die.

Scours are common among young pigs. They are often due to poor feeding and lack of exercise. The sow may be fed too much or the ration may not be suitable. Pigs often get them just after weaning. Sudden changes in the amount of kinds of feed of either the sow or the pigs may cause the trouble. Put some air slacked lime in water and after shaking or stirring it thoroughly let it settle and draw off the clear liquid. Feed a cup full of this once a day to the sow if the pigs are still suckling, or a tablespoonful twice a day to each pig in the slop if they have been weaned.

Constipation is seldom present when the sows and pigs are properly fed. The feeding of such laxative feeds as oil meal, bran, or alfalfa hay will prevent its occurrence. If it does occur feed laxative feeds and add some castor or raw linseed oil to the ration. For a 50 pound pig one tablespoonful is about right. Other pigs should receive larger amounts in proportion to their weight.

Hairless pigs are caused by a lack of iodine in the body of the sow. There is no cure for them. If you live in a hairless pig district you can prevent them by feeding potassium iodine. This substance can be secured from your druggist in one, three,
or five grain tablets. These should be crushed and mixed with the sow's feed so that she will get about one grain every day for the first 80 or 90 days after breeding. Feeding it the last 30 to 40 days before farrowing will do no good.

Lice cause more trouble than any other parasites. They are very common and yet are easily killed. Crude oil rubbed on the pigs with a cloth or sprayed on the pigs will kill the lice. Some people tie sacks around a post and saturate them with oil and then let the pigs rub against them. This is quite good but the pigs do not always get the oil rubbed on back of the ears or in the flanks where it is most needed. In case crude oil is not handy the old oil drawn from the crank case of an automobile or tractor engine will do very well. Kerosine will also kill the lice but burns the skin of the pig.

The effect of lice was shown in an experiment by the United States Department of Agriculture. The pigs without lice gained 23 pounds more in 90 days than the others and used much less grain than the lousy pigs.

Mineral mixtures sometimes help to produce better pigs. In some sections of the state there appears to be little if any need for them while in other districts the need for them seems great. Complex mixtures seem to be of no greater value than simple ones. A good but simple mixture can be made by mixing one part by weight of salt, two parts of wood ashes, and two parts of burnt bone ash. Ground limestone or air slaked lime may be substituted for the wood ashes. Bone meal, calcium phosphate, or ground rock phosphate may be substituted for the burnt bone ash.

Burnt bone ash may be prepared at home by building a small fire and then piling old bones on it. When the bones are burned, the ashes should be gathered up, placed on a wood or concrete floor and lumps pounded out with a wooden mallet or a heavy piece of wood. The ashes can then be mixed with the other ingredients. The mixture can be put in a self feeder or a box and the pigs allowed to help themselves.

Questions

1. How can thumps be prevented?
2. How do pigs act that have thumps?
3. What would you do if you thought your pigs had cholera?
LESSONS FOR PIG CLUB MEMBERS

4. What would you give pigs having the scours?
5. How can lice be controlled?
6. What effect do they have on the pigs?
7. How can hairless pigs be prevented?
8. What would you use to make a good mineral mixture?

LESSON 17

Breeding

Sows can only be bred at certain times. The time during which they can be bred is called the “heat period.” They stay in heat about two or three days. These heat periods occur about every 20 or 21 days.

A sow that has just farrowed will come in heat about three days after the pigs are born. After that she will not usually come in heat again until after the pigs are weaned. If you have a sow that is suckling pigs and wish to breed her take her away from the pigs at night. In about a week or ten days she will usually come in heat. After breeding she can stay with the pigs all the time.

After a sow is bred she will not come in heat again until after she farrows. From the time that the sow is bred until she farrows is usually from 112 to 114 days. It is best to figure in the 112th day and to watch the sow closely after that. If you want to figure the day on which a sow is due count off on the calendar three months, three weeks, and three days. A few sows will farrow before the 112th day but most of them will farrow after that. The period that they carry their pigs is called the gestation period.

The father of a litter of pigs is called the sire. The mother is called the dam. A pure bred pig is one whose sire and dam are both registered or can be registered. A grade pig is one that shows some purebred breeding. A scrub pig is one that shows no sign of good breeding.

The ancestors of any pig all contribute to the qualities which the pig inherits. Some may contribute good qualities, other ones bad qualities and the pig may have all of these in it. They may not all show up in the pig but you may see them in the pigs that it produces. This is one reason why pure bred pigs are better than grade pigs. They and their ancestors have been picked for
good points for many years and as a result most of the qualities which a pure bred pig gets from its sire and dam are good points. It is then able to give these qualities to its own pigs.

It is not the looks that count as much as the ability of the pig to produce pigs that have the qualities we want. It is because of these things that pure bred sires will usually get a better lot of pigs than a grade sire that may look just as good.

A pedigree is a statement of the ancestors of a certain pig. It is usually arranged in the following form:

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                           Emperor
                          /      |
                        King     Beauty
                         |      |
                       Lad     Queen
                         |      |
                       Jack    Lassie
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This means that Lad is the pig whose pedigree is shown and that his sire was King and that his dam was Queen. The sires of King was Emperor and his dam was Beauty. The sire of Queen was Jack and her dam was Lassie. Emperor and Jack are the grandsires and Beauty and Lassie are the grand dams of Lad. Of course these animals had sires and dams but it is the animals closest to the “top” of the pedigree that count most and so only two to four generations are usually shown. Some people pay considerable attention to animals far back in the pedigree but the ones that the nearest to the animal under consideration are the ones that should receive the most attention. If they have been good then the last animal will probably be good but if they were poor, then a few good animals way back in the pedigree will not help the animal you have in mind very much.

We always speak of pigs as being by a certain boar and out of a certain sow.

In order to keep a record of our pigs each one should be ear marked. This can be done with a tag or by putting a notch in the ear. The notch can be made with a punch or a knife. Various systems of notches can be used but one of the simplest
and best is the one shown in Figure 15. In this system the numbers are made by combining the marks. Number 1 would have a notch in the outside of the right ear. Number 2 would have two notches there. Number 3 would have one notch in the outside of the left ear. Number 4 would have one notch in the outside of each ear. Number 11 would have one notch in the inside of the right ear and one in the outside and so on. Each pig may be numbered or all the pigs in the same litter may be given the same number.

Questions

1. How often do sows come in heat?
2. Will they come in heat while suckling their pigs?
3. How long is the gestation period?
4. What is a pure bred pig? A grade? A scrub?
5. Why are pure bred boars more apt to get good pigs than grade boars?
6. What is a pedigree?
7. Explain how the different animals on it are related?
8. What is the sire? The dam?
9. How do you ear mark your pigs?

LESSON 18
Shows and Sales

Livestock shows are educational institutions. They are not only for the benefit of the city and country folk who throng to them but also for the men who exhibit stock. Here the stock breeders come together and by showing their animals against those of other people learn whether they have the proper type, the faults of their animals, and how to correct them. If you think you have the best animals in the state take them to the
fairs and you will soon find out whether they are or not. If you are sure your animals are not very good take them to the fairs and learn how good or how bad they are and how to improve them.

There is nothing better for the beginner than to take his animals to the shows. You not only learn much about hogs in general but you get to know people who are in the market for breeding stock and they get to know you and your stock.

If you are planning on showing your pig at a fair secure a premium list as soon as they are issued. Study this list and see where you can enter your pig. The usual show classification is as follows:

**For 1924 Shows**

Junior Boar or Sow Pig. Must have been born on or after March 1st, 1924.

Senior Boar or Sow Pig. Must have been born between September 1st, 1923, and March 1st, 1924.

Junior Yearling Boar or Sow. Must have been born between March 1st and September 1st, 1923.

Senior Yearling Boar or Sow. Must have been born between September 1st, 1922, and March 1st, 1923.

Aged Boar or Sow. Must have been born previous to September 1st, 1922.

At smaller fairs the number of classes is sometimes reduced. Then the juniors and seniors are usually grouped together and the classes become, boar or sow pig under one year; boar of sow, one year and under two; and boar or sow over two years of age.

No entries should ever be made for the championship classes. Only first prize winners are eligible for entries to these classes and the winners are not known until the various classes are judged. The first prize junior and senior pigs are judged to determine the junior champion of each sex. The first prize junior and senior yearlings and the aged animals are judged to determine the senior Champion of their sex. Junior and senior champions are then brought together to determine the grand champion of each sex.
Study the classification to determine how many places you can enter your pig or pigs. Having done this fill out the entry blanks and forward them to the proper person before the time limit expires.

Fitting the pigs for show is not hard if properly fed. About 30 pounds of ground corn or barley, 30 pounds of ground oats, 30 pounds of good white middlings and 10 pounds of old process oil meal makes a good ration for fitting the pigs for show. If you can feed about 3 pounds of skim milk to each pound of grain you will have an excellent ration. This ration should be fed as thick creamy slop. It should be mixed thoroughly and then allowed to soak for several hours. Never let it get sour.

Feeding whole milk is not advisable because it is expensive and will not give much better results than skim milk. Sometimes it causes small wrinkles on the skin that injure the appearance of the animal and often the pig becomes too fat.

The pigs should be fed so that they will come into the show ring with enough fat on them to smoothly cover them but not to be as fat as though they were going to market.

A little good alfalfa hay kept in the pen will help to supply the growing pigs with the bone builders they need to develop strong pasterns. A mineral mixture is also good, especially if it contains a good amount of bone meal or finely ground limestone.

Brush the pig every day or two for this will help to make them easily handled and keeps the skin and hair in good condition. Before going into the show ring take a hand clipper or a pair of shears and clip the long hairs off the edges of the ears and around the nose and jaw. Also clip the tail from the brush up to the tailhead.

Have your animals so that they can be easily handled in the show ring. A light hurdle is excellent for guiding the animals about the ring. A buggy whip is also very good to handle them with. After some training a light touch on either side of head will start them in the proper direction.

A good dressing to use on the pigs can be made of cottonseed oil with just enough wood alcohol added to “cut” it and make a nice thin easy running liquid. After the pig has been washed apply the dressing with a cloth and rub it into the skin.
When in the ring don't watch the judge all the time but watch you pig and see that it shows itself to the judge in its very best form. Keep it wide awake and alert but do not get it excited.

While the judge is at work do not try to tell him about the good points of your animal. If he is a good judge he will soon find them out. Answer any questions he may ask you and be able to show the registration papers for all your animals in case he calls for them.

It takes a good man to be a good loser but a better man to be a good winner. If you got lower than you expected resolve to do better next time. If you got first be thankful and do not boast to those who did not get as high. The man who makes the largest success of the show and breeding business is always a gentleman in defeat or victory.

If you go on a long trip with your animals feed them the same feeds as you fed at home and while on the train feed lightly if you feed at all. While at the fair feed them as you did at home or a little less. Show animals need plenty of exercise both before and during the fair. Slowly walk the animals out a quarter of a mile and back every day. This will help to keep them in good condition.

After you get them home from the fair reduce the feed they have been getting. The amount of oats can be increased and the other feeds cut down. Don't reduce the ration too quickly but do it gradually so that the pigs hardly notice the change.

Questions

1. What is a good ration for fitting for show?
2. Should whole milk be fed?
3. Should the pigs be fat?
4. How would you fit a pig for show?
5. What is a hurdle? How is it made?
6. What should you do in the ring?
7. Should the pigs be fed heavily on the train?
8. How much exercise should the pigs have?