

1974

EC74-212 Breeding Herd Management

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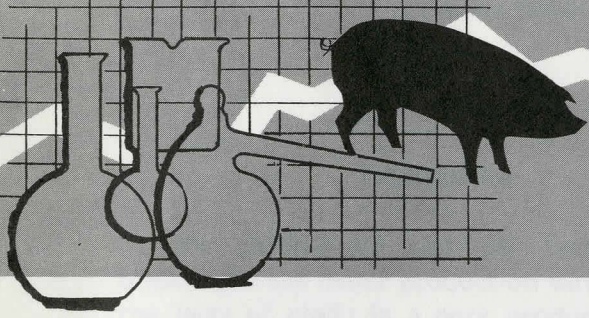
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BREEDING HERD MANAGEMENT

Edited by M. J. Anderson, Extension Specialist, University of Nebraska-Lincoln



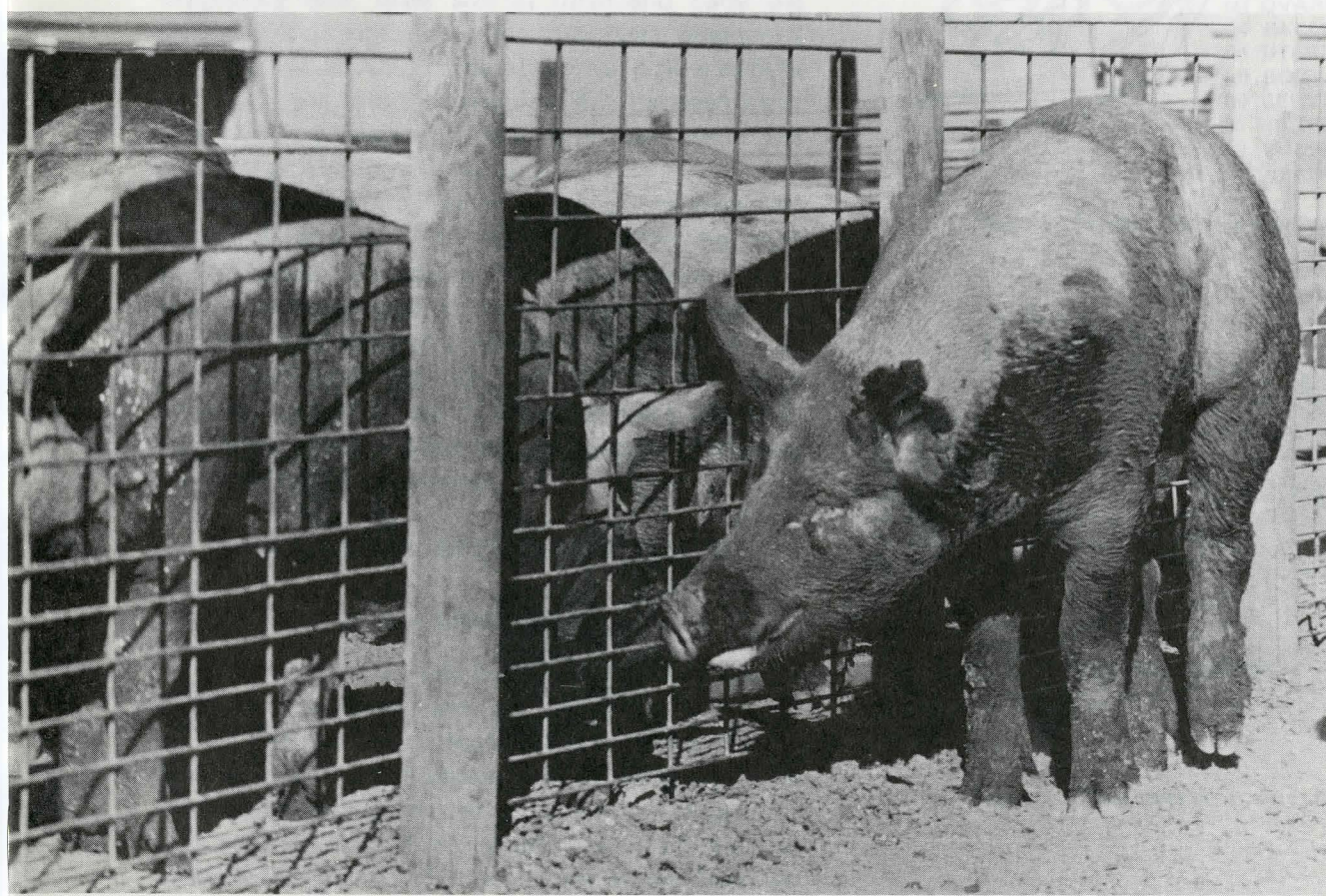
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BREEDING HERD MANAGEMENT

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J. L. ADAMS, DIRECTOR

BREEDING HERD MANAGEMENT

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Introduction

The number of pigs per female kept for breeding is the major production variable affecting the level of profit in a pork producing unit. The economic impact of producing one more pig per sow is large.

Performance of the breeding herd depends upon pregnancy rate, litter size at birth and baby pig survival. It is not uncommon to have pregnancy rates as low as 70%, prenatal survival as low as 50% and baby pig losses as high as 30% between birth and weaning. Nebraska pork producers wean less than 7½ pigs per sow farrowing.

Normal reproductive function of the boar and sow is fundamental to successful breeding herd performance. Management of the breeding herd should be evaluated in light of the impact the practices will have on pregnancy rate, litter size at birth and baby pig survival. Further economic benefits can be realized by adopting practices which save labor, feed or other expense without reducing reproductive performance.

FACTORS AFFECTING LITTER SIZE

What Factors Control Litter Size?

The number of pigs born in a litter varies. Of particular importance are:

1. The number of eggs or ova produced by the female. This sets the upper limit on litter size. The number of eggs produced by the ovary (Figure 1) and released into the reproductive tract via the infundibulum and fallopian tubes varies from female to female and heat period to heat period. Sows normally produce 14-20 eggs, gilts produce 10-18 eggs.

2. The rate of fertilization or percent of the eggs which unite with sperm from the boar (Figure 2). Unfertilized eggs do not develop into pigs.

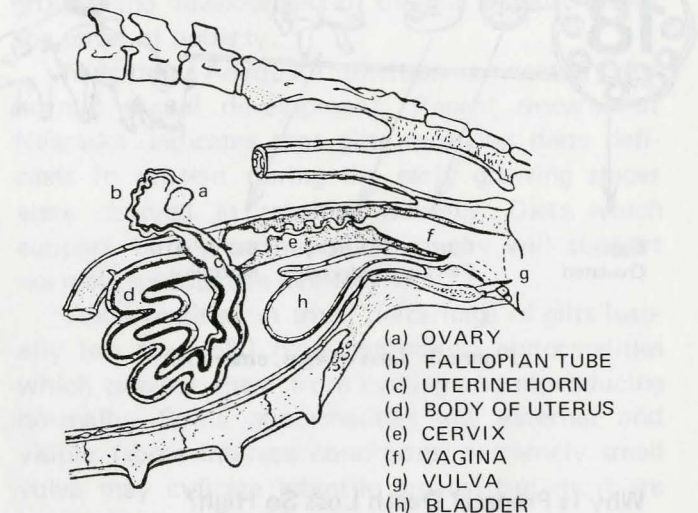


Figure 1. Female tract schematic.

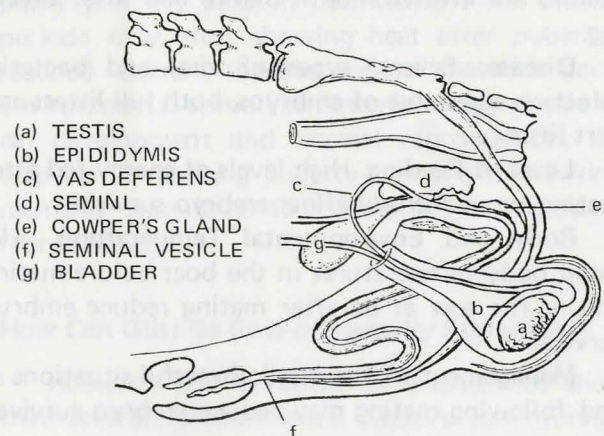


Figure 2. Male tract schematic.

3. Embryo and fetal loss. Many fertilized eggs are not represented by fully developed piglets at birth.

If each egg ovulated were fertilized by a sperm and carried through pregnancy, litters from sows

would average 14 to 20 pigs, from gilts, 10 to 18 pigs. But, the average number of pigs actually farrowed per litter is less than 10 — a 30 to 50% loss in potential litter size (Figure 3).

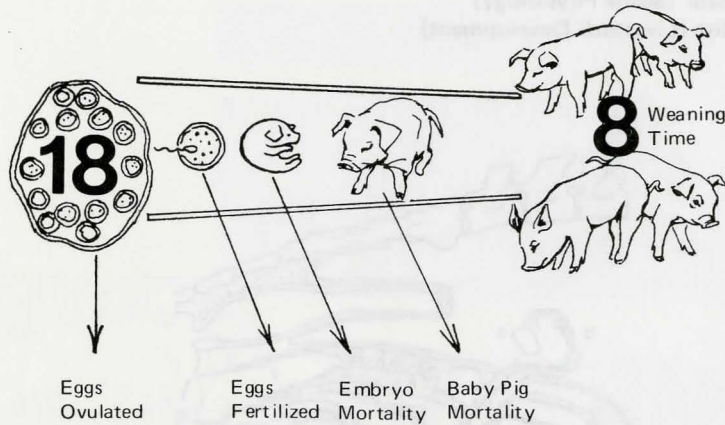


Figure 3. Loss of eggs, embryos.

Why Is Prenatal Death Loss So High?

Exact causes of embryo death are not well understood. Recent research indicates that several factors are involved—both before and after breeding.

Disease. Several types of viral and bacterial infection cause loss of embryos, both full litters and part litters.

Level of Feeding. High levels of energy fed after mating may adversely affect embryo survival.

Body and Environmental Temperatures. Elevated body temperatures in the boar before mating and in the sow at or after mating reduce embryo survival.

Management of the Herd. Stressful situations at and following mating may reduce embryo survival.

SOW & GILT MANAGEMENT— PRE BREEDING PERIOD

When Should Gilts Be Selected For Replacements?

Select gilts for breeding purposes when they reach 180-200 pounds. The feed cost and extra condition due to carrying gilts on full feed to

heavier weights cannot be justified. Most differences between gilts for backfat thickness, growthiness and soundness will be apparent by the time they reach 180-200 pounds. Select the fastest growing, leanest gilts for breeding purposes. Market unsound gilts.

Should Litter Size Be Considered In Selection?

Recent research suggests that litter size can be improved by selection. However, selection techniques available to commercial pork producers would yield slow improvement in litter size. Avoid gilts born in small litters. Ear mark gilts from large litters before weaning for later identification. Commercial producers can maximize litter size by carefully following a well designed crossbreeding program.

Should sows and gilts have permanent individual identification? Good managers permanently identify individual sows. The identification allows the producer to determine which sows have been productive and which sows should be culled. Ear notching is the standard of identification for registered stock. Many commercial producers use ear notching to advantage. Results with ear tags have been variable. Hanging tags made of pliable plastic have given the best results. Some producers brand sows. Neither freeze branding or hot branding have been effective enough to be recommended.

Why Use Crossbreeding?

Performance of crossbred pigs is generally superior to the average performance of the breeds crossed. This superiority is called heterosis or hybrid vigor. This superiority is largest for reproduction rates and pig vitality. A well designed crossbreeding program allows pork producers to combine the best traits of several breeds and to capitalize on the hybrid vigor.

How Should Gilts Be Fed After Selection?

Remove gilts from the finishing pen when they are selected for breeding. If they weigh over 200 lb limit their energy intake to the equivalent of four pounds of properly fortified corn-soybean meal diet per day. Feed 5 lb per day to selected gilts weighing less than 200 lb. Limit feeding can be accomplished by hand feeding daily, interval feeding or self feeding a low energy diet.

What Is Flushing And When Should It Be Done?

Flushing is the practice of increasing energy intake of females before breeding. This is done to maximize ovulation rate of gilts at breeding time. High energy diets are commonly used. Limit-fed gilts can be flushed by feeding 6 to 8 pounds of a 14% protein diet for 10 days before breeding. Return to restricted energy levels the day after breeding.

Flushing is not recommended for sows because they show little response. In addition, ovulation rate is not a limiting factor in sows.

At What Age Should Gilts Be Bred?

The best breeding age depends upon when the gilts reach puberty. Gilts should have at least one heat period before breeding because they normally ovulate fewer eggs the first heat period than at later heat periods. Most gilts express first estrus between 180 and 220 days. Consequently, they should be bred at seven to eight months for best results. The physiological age of the gilt as measured by number of heat periods is a better indicator of when to mate than is the size of the gilt.

Should Females Be Blood Tested For Brucellosis and Leptospirosis Before Breeding?

If gilts are not from a validated free herd, test all breeding stock at least three weeks before breeding. If positive brucellosis reactors are found, it is usually best to market the entire group and start again with gilts from a validated brucellosis-free herd. The test and slaughter method of eliminating reactors is not adequately effective for general application.

If leptospirosis is present, give a single injection of an effective antibiotic to eliminate the leptospirosis carriers. Vaccinate the breeding herd for the type of leptospirosis found within a few days. Four types of leptospirosis infect swine. Test for all four types. Consult your veterinarian about leptospirosis control.

GILT & SOW MANAGEMENT— BREEDING PERIOD

Why Do Some Gilts Fail To Show Heat?

Several factors may be involved when gilts fail to show heat or are delayed in showing heat. These factors include age, purebreeding, disease, nutrition, abnormalities and environmental conditions.

Age. Most gilts reach puberty (show first heat) between 180 and 220 days of age. Some gilts reach puberty as early as 4½ months, while others are as old as 12 months. Gilts which are slow to mature sexually should be marketed.

Purebreeding. Crossbred gilts generally show heat at younger ages than the average of the breeds represented in the crossbred. At a constant breeding age, crossbred gilts will have had more cycles and will ovulate more eggs than purebred gilts.

Disease. Disease problems which retard the growth and development of the gilt will also retard the onset of puberty.

Nutrition. Adequate nutrition is necessary for normal sexual development. Recent research at Nebraska indicates that gilts receiving diets deficient in protein during the early growing stages were delayed in reaching puberty. Diets which support best growth and efficiency will support normal reproductive development.

Abnormalities. A small percentage of gilts (usually less than 5%) have anatomical abnormalities which prevent them from cycling and reproducing normally. Some abnormalities are external and visible (some intersex conditions; extremely small vulva may indicate infantile organs) but most are internal and not visible.

Environmental Conditions. Gilts reared in confinement are often reported to be slow to reach puberty. Gilts held in confinement for breeding periods may stop showing heat after puberty is reached. Current theories suggest that the lack of environmental stimuli can interfere with physiological development and normal reproduction. Gilts delayed in reaching puberty can often be environmentally stimulated to initiate or resume normal reproduction.

How Can Gilts Be Environmentally Stimulated?

Research and practical experience has shown that several environmental factors can stimulate non-cycling gilts to cycle. The stimulation may also cause estrus synchronization. Heat in gilts nearing the age of puberty can be stimulated and synchronized by exposure to a boar, provided gilts have not had prior contact with a boar. "Transport phenomenon" refers to the tendency of groups of gilts to come into heat simultaneously soon after being transported from one farm to another. Although not substantiated by research, variations of this phenomenon have been adopted to aid the stimulation of estrus in young gilts and recycling in older

gilts. These variations include mixing pens of gilts, loading and hauling around the section, fluctuating temperature and humidity in enclosed structures and radically changing the feeding program.

Does High Temperature Affect Conception Rate and Litter Size?

High body temperatures can be harmful to embryo survival. Elevated body temperatures can be caused by either infection or high environmental temperatures. Do not mate sick pigs. During hot weather use shades, mists and wallows to cool the pigs (Figure 4). With enclosed housing use evaporative coolers to keep the breeding herd cool. Heat stress, even short term, is especially damaging during the first 2-3 weeks of gestation.

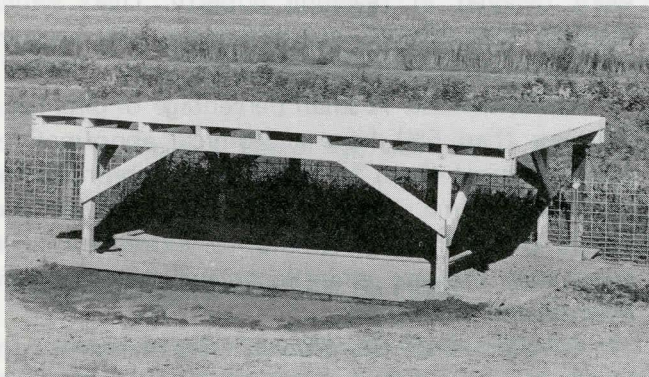


Figure 4. Shade for sows.

Should Sows Be Bred On The First Heat Period After Weaning?

Yes. Except when weaning occurs prior to three weeks, sows should be rebred on the first heat period. When the pigs are weaned prior to three weeks, breeding on the second heat period is more certain and may yield larger litters.

Should Sows Be Flushed After Weaning?

When sows are bred on the first heat period, there is no value in flushing. Apparently, weaning the pigs has a flushing effect on the sow. Feed very thin sows extra at weaning to insure that they cycle on schedule.

Should Antibiotics Be Fed At Breeding Time?

Antibiotics are most effectively used to combat specific problems. In some herds with histories of

breeding problems, the use of oral antibiotics at therapeutic levels has improved breeding performance. Specific problems in herds with histories of small litters should be diagnosed and treated by a veterinarian. If antibiotics are fed in the breeding ration, they should be discontinued within 2 or 3 weeks after breeding.

What Is Pen Mating?

Pen mating refers to the practice of running the boar with the females he is to breed. When a sow or gilt comes into heat, the boar breeds them when and as often as he chooses.

What Is Hand Mating?

Hand mating is the practice of supervising heat detection and breeding. Boars are housed separately from females. When a sow or gilt is detected in heat, she and the boar are put together for breeding.

Which Is The Best Practice, Hand Mating Or Pen Mating?

Both pen mating and hand mating have been used successfully. Hand mating allows the producer to keep track of when sows and gilts are bred. Hand mating conserves the boar and allows him to breed more females than when pen mated. Pen mating requires less labor than hand mating, and when ample boar power is available gives equal results. Pen mating requires surveillance to insure that successful copulation is occurring.

What Is The Best Way To Detect Heat?

Several methods of heat detection are available. The best systems combine visual observation by the manager and the behavior of the boar and gilt. Changes in the size and color of the vulva often are visible. Gilts coming into heat respond to the presence of a boar in a characteristic manner. Gilts in heat seek the boar and initiate contact. This behavior of the gilt is quite useful in heat detection. If boar and gilt pens are adjacent, gilts coming in heat will isolate themselves near the boar pen. If a boar is taken into a gilt pen, the gilts in heat will go to the boar (Figure 5). Some producers allow the "heat check" boar to mount, but not penetrate or breed the gilt to insure that she is in "standing heat". When gilts are found in heat, they should be marked and penned for breeding.

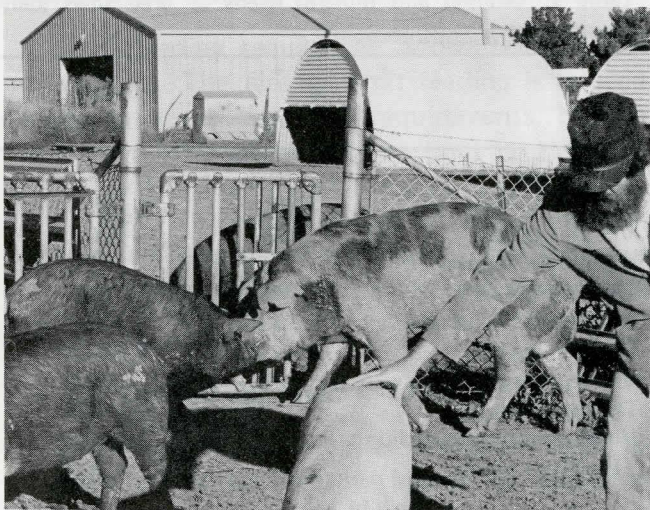


Figure 5. Heat check procedure.

Is The Boar Needed for Heat Detection?

Yes. Research indicates that a good herdsman can detect only about 50% of the gilts in heat without the boar. Working with a boar, nearly all of the gilts in heat can be detected.

At What Stage In The Heat Period Should The Sow Or Gilt Be Bred?

Breeding the female a few hours before ovulation produces the highest conception rate. Since onset of estrus precedes time of ovulation by 24-36 hours (average is 33), mating should be timed 12-24 hours after start of estrus. When heat checking is done once a day, matings should be made when heat is first detected. If heat checks are made twice daily, matings should be made 12 hours after detecting heat.

What Breeding Schedule Should Be Followed for A.I.?

The breeding schedule recommended for natural mating should be followed for A.I. Since fewer sperm cells are inseminated with A.I., timing becomes more crucial. The suggested schedule should be closely followed.

Should Gilts And Sows Be Bred Twice?

When mating is properly timed, double mating will do little to improve fertility rates. Double mating will help insure that one of the insemina-

tions is at optimum time and may improve conception rates. This would be more valuable with once a day heat checking. With double mating, the second mating should be 12-24 hours after the first mating.

Can Hormones Be Used To Induce Estrus and Ovulation?

Hormone preparations are available which will induce estrus and ovulation in gilts. However, the use of hormones is not generally recommended because of the cost, extra handling required and possible adverse side effects if treatment is improperly timed. Pregnant Mare Serum Gonadotropin (PMS) and Human Chorionic Gonadotropin (HCG) are the most commonly used hormones for this purpose. They are available from your veterinarian.

Are Hormones Available For Estrus Synchronization In Gilts?

Effective hormone treatments for estrus synchronization of gilts are not available. During the 1960's, much attention was given to the development of an oral compound which would be effective in synchronizing gilts. However, the compound was not approved by the FDA for use in the U.S.A. Other experimental compounds are currently being tested, but none are available. In the post-weaning sow, PMS and HCG are being used to improve the synchrony of the post-weaning estrus.

Will Moldy Feed Interfere With Normal Reproduction?

Do not feed moldy corn to the breeding herd. Moldy corn can cause abnormal cycles and conception rates in sows and gilts. Other molds reduce litter size and pig vitality at birth. Although many of the molds found on feed grains are not harmful, the difficulty in identifying molds which are harmful makes feeding moldy grain to breeding animals risky.

SOW AND GILT MANAGEMENT— GESTATION PERIOD

How Important Is Level Of Feeding During Gestation?

A wide range of gestation feeding levels will support good performance. However, avoid extreme levels of feeding. Feeding excess energy is wasteful and may lead to increased embryonic mortality during the first month of gestation. On the other

hand, diets deficient in energy, protein or other nutrients lead to disappointing results. A limit feeding system using balanced, properly fortified diets is recommended.

What Is Limit Feeding?

Limit feeding limits the energy intake of gestating sows and gilts. It is a combination of a feeding system and diet formulation which insures that each sow meets her daily requirements for all nutrients without consuming excess energy. Limit feeding is designed to limit only energy consumption.

How Much Feed Is Needed?

During most months, four pounds of a corn-soybean diet or its equivalent will provide adequate energy. During periods of cold weather or environmental stress, adjustments in the level of feeding are necessary. Daily requirements of other nutrients should be met regardless of the level of feeding. These requirements are given in Table 1. Diets formulated to meet these needs are given in Table 2.

Table 1. Vitamin and mineral needs of bred sows (daily requirements).

	<i>N. R. C. requirement</i>	<i>Nebraska's allowances</i>
Vitamin		
Vit. A, I.U./day	8,200	10,000
Vit. D, I.U./day	550	800
Riboflavin, mg/day	8.2	12.0
Niacin, mg/day	44.0	60.0
Pantothenic Acid, mg/day	33.0	36.0
Choline, mg/day	-----	1,800.0
Vit. B ₁₂ mcg/day	28.0	60.0
Thiamine, mg/day	2.8	4.0
Vit. K (menadione sodium bisulfite) mg/lb	-----	4.0
Mineral		
Calcium, gms/day	15.0	16.0
Phosphorus, gms/day	10.0	14.5
Salt, gms/day	10.0	10.0
Zinc, mg/day	90.0	180.0
Iodine, mcg/day	364.0	400.0
Copper, mg/day	11.0	18.0
Iron, mg/day	-----	180.0
Manganese, mg/day	36.0	50.0

Table 2. Suggested rations for pre-gestation, gestation and lactation.

<i>Ingredient</i>	<i>14% Protein Pre-gestation and gestation (limited-fed)</i>				<i>15% Protein Lactation (full-fed)</i>			
Ground milo or corn	1554 lb	-----	-----	449 lb	1263 lb	-----	-----	1257 lb
Ground ear corn	-----	1553 lb	-----	-----	-----	1533 lb	-----	-----
Ground oats	-----	-----	1749 lb	-----	-----	-----	-----	302 lb
Soybean meal (44% protein)	300 lb	353 lb	159 lb	104 lb	349 lb	373 lb	-----	347 lb
Dehydrated alfalfa meal (17% protein)	50 lb	-----	-----	-----	100 lb	-----	-----	-----
Alfalfa hay (15% protein)	-----	-----	-----	1320 lb	-----	-----	-----	-----
Ground dried beet pulp	-----	-----	-----	-----	200 lb	-----	-----	-----
Ground limestone	6 lb	11 lb	10 lb	-----	4 lb	12 lb	-----	12 lb
Dicalcium phosphate	58 lb	51 lb	50 lb	4 lb	52 lb	50 lb	-----	50 lb
Monosodium or sodium tri-polyphosphate	-----	-----	-----	41 lb	-----	-----	-----	-----
Salt (iodized) ^a	10 lb	10 lb	10 lb	10 lb	10 lb	10 lb	-----	10 lb
Trace minerals ^a	2 lb	2 lb	2 lb	2 lb	2 lb	2 lb	-----	2 lb
Vitamin premix ^b	20 lb	20 lb	20 lb	20 lb	20 lb	20 lb	-----	20 lb
	2000 lb	2000 lb	2000 lb	2000 lb	2000 lb	2000 lb	-----	2000 lb

^aThe trace mineral mix and/or iodized salt should supply: 90 grams of zinc, 0.15-0.20 grams of iodine, 90 grams of iron, 9 grams of copper, 25 grams of manganese and 10 pounds of salt per ton of feed.

^bAdded at the following rate per ton of ration: Vit. A, 5,000,000 IU; Vit. D₂ or D₃, 400,000 IU; Riboflavin, 5.0 gm; Niacin, 30.0 gm; Pantothenic acid, 12.0 gm; choline, 700 gm during gestation, 300 gm during pre-gestation and lactation; Vit. B₁₂, 30 mg; Vitamin K (menadione sodium bisulfite or equivalent) 2.0 gm.

Doesn't Limit Feeding Take Extra Management?

Limit feeding requires an added level of sow management. The idea of limit feeding is to feed enough to meet the sows requirements, but no more. Very little safety factor is built in. Hence, it is important to insure that every sow gets her share of the feed. The small amount of added management saves a large amount of feed. Limit fed sows may act hungry. Durable fences and feeders are required.

How Do You Manage Limit Feeding?

There are basically three systems used to successfully restrict energy intake of gestating females. These are daily individual feeding, interval feeding and self-feeding high fiber diets.

How Does Daily Individual Feeding Work?

Success of this system is based on adequate individual feeding stalls. The individual stall is necessary to prevent boss sows from robbing feed from slower eating sows. Many producers use feeding crates. Crates should be 18 inches wide, 30 inches high, 42 inches long and have solid dividers in the trough area. Figure 6 shows a set of inexpensive homemade feeding stalls. Daily individual feeding allows one to control the condition of individual sows.

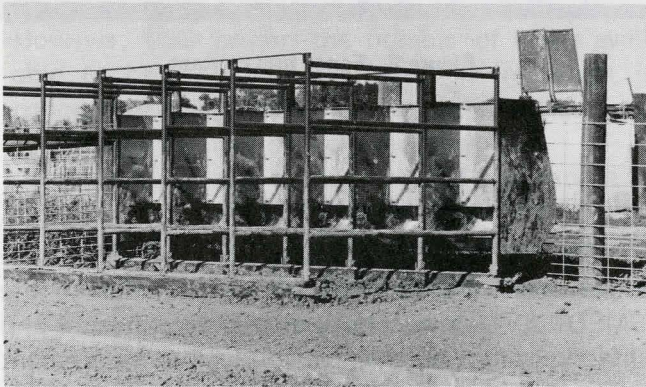


Figure 6. Feeding crates.

What Is Interval Feeding?

With interval feeding sows are allowed to consume several days worth of feed, then wait several days to eat again. This system allows every sow in the pen to eat her fill even if she is a slow eater. Adjustments in average daily intake are made

by altering either the time on the feeder (2-12 hours) or the time off the feeder (2-4 days). One self-feeder can serve several pens of sows by alternating the day fed, or the self-feeder in a pen can be paneled off and opened only when needed. If time on the feeder is restricted, one hole per sow is needed. (Figure 7).

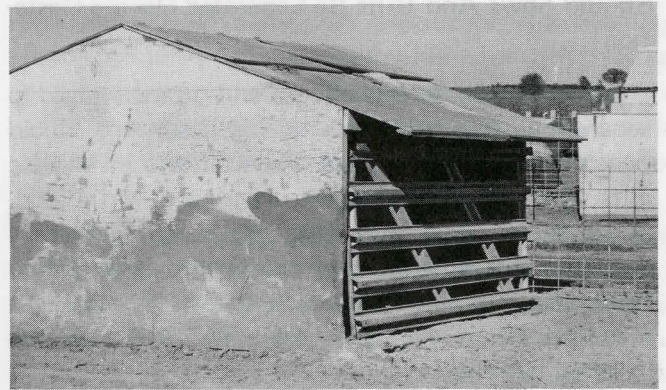


Figure 7. Interval feeding setup—panels around feeder.

Is Self-Feeding Sows A Recommended Practice?

Self-feeding gestating sows is a proven method of feeding. However, sows tend to over eat when allowed to self-feed. Feed costs increase and sows become overly fat. Self-feeding can work well for gestating sows if a high fiber diet is fed. If bulky ingredients such as hay, corn stalks, straw or corn cobs are included in the diet, overfattening can be avoided. Diets must be formulated particularly for this feeding system.

Variations of this system involve feeding silage, whole plant corn pellets, alfalfa pellets or diets containing appetite inhibitors. Corn silage requires supplementation with $\frac{1}{2}$ lb of 40% protein supplement per head per day. Grass silage requires the addition of 1 or 2 lb of grain daily and $\frac{1}{2}$ lb of 40% supplement. Additional vitamin supplementation may be necessary.

How Much Alfalfa Can Be Used In Gestation Diets?

Alfalfa is a good nutrient source for gestating gilts and sows. With proper vitamin and mineral supplementation, ground alfalfa hay can be used for up to 100% of the diet. Dehydrated alfalfa is less palatable and should not exceed 25% of the diet.

Should Level Of Feed Be Increased Before Farrowing?

An increase of 1 lb per day of feed 2-3 weeks before farrowing will produce heavier, more vigorous pigs at birth. This should improve baby pig survival because bigger pigs at birth have higher survival rates.

Should Sows And Gilts Be Separated During Gestation?

There are both advantages and disadvantages to separating sows and gilts during gestation. Mixed pens are harder to manage. Sows tend to intimidate gilts and eat more than their share of feed. However, if sows and gilts are run together, a common antigen-antibody relationship exists which helps minimize later disease problems. If excellent management is available, sows and gilts can be handled together.

BOAR MANAGEMENT

When Should Boars Be Purchased?

For best results, new boars should be bought 60 days before they are needed. The 60-day period serves as a "disease adjustment" period which can effectively reduce the number of infection related reproduction failures. It also is a period during which the young boar can be trained and checked for fertility.

Why Is a 60-Day Period Recommended?

Elevated body temperature, caused by either heat stress or sickness, interferes with boar fertility. Recent research shows that the boar's fertility was reduced for two-eight weeks following 72 hours of heat stress. The 60-day "disease adjustment" period allows the boar to be exposed to any diseases found on the farm and still have time for semen quality and fertility to recover before the breeding period. To encourage timely infection and recovery, the new boar should be exposed to resident pathogens soon after he arrives.

How Should The Boar Be Managed During The Disease Adjustment Period?

When the new boar arrives pen him away from the breeding herd. After the boar has had time to become rested and on feed, place a couple of market gilts with him. The gilts provide direct

contact for disease transmission and stimulus for the sexual development of the young boar. At this time, fecal material from sow lots should be placed in the boar's pen to provide a broader contact with the microflora present in the breeding herd. Do this during the first week. Maintain the new boar apart from the breeding herd for about four weeks. The second phase of the adjustment period involves controlled access to the breeding herd. Give the boar fence line contact with the breeding herd for 30 days before breeding (Figure 8). This allows the females to be exposed to any infection which the boar might carry that would interfere with normal reproduction. Fecal exchange between the boar and sow lots enhance the contact.

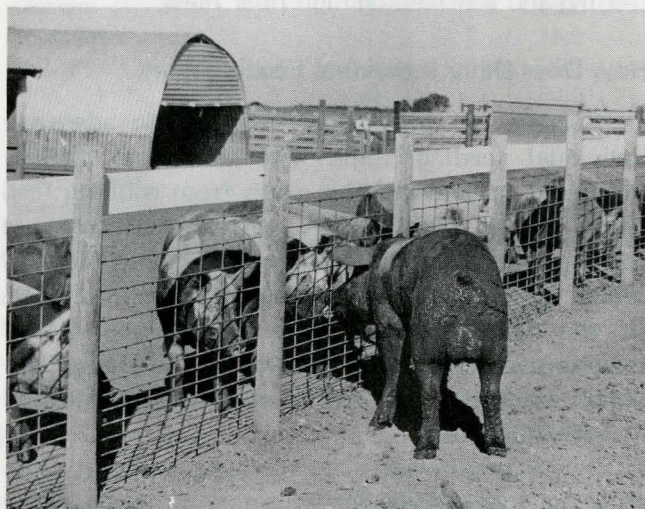


Figure 8. Fence line contact.

Why Is This Exposure Necessary?

During recent years, many pork producers have experienced reproduction problems similar to the SMEDI syndrome. The prebreeding exposure and infection referred to above is the only management procedure known to be effective in preventing SMEDI.

What Is SMEDI?

SMEDI stands for stillbirth, mummified fetus, embryonic death and infertility. Viral infections in the sow can cause these reproduction failures. Several viruses are involved and one or more of the problems can occur at the same time. Introduction of new boars has been implicated with the outbreak of these problems. Current research indicates that if

the infection takes place at the time of mating, the subsequent litter is affected, while if the infection precedes mating, normal reproduction can follow. To be most effective, the infection needs to occur at least four weeks prior to mating.

Should Boars Be Penned Together?

Do not pen boars together unless they have been raised together before purchase. If boars are to be used together during breeding, pen together—but watch them.

How Much Space Should Be Provided for the Boar?

The boar should have at least 15 sq. ft. of sleeping area. Provide ample exercise area (lot 10' x 100'). Feed the boar some distance from the sleeping area so that he will have to move about.

Why Do Some Boars Fail To Exhibit Sex Drive?

Some new boars do not exhibit adequate sex drive. Usually this is because they are too young and immature. If properly handled, most will develop into good breeders. New boars need time to adjust to their surroundings. Do not place them in groups of larger and older boars or sows. The new boar will be intimidated by the older pen mates.

How Many Gilts And/Or Sows Can A Boar Handle?

Because boars vary in their ability to service sows, exact recommendations cannot be made. However, boar power—the number of boars available to breed a group of sows—is important in conception rates. Some general recommendations:

1. Boars should be eight months old.
2. Young boars (under a year of age) cannot be expected to breed as often as mature boars.
3. Don't plan on more than a sow a day for mature boars or a sow every other day for young boars.

How Can More Aggressive Breeding Be Encouraged?

Competition among boars may encourage more aggressive breeding. In pen mating systems where sire identification is not necessary competition can be encouraged by running two boars with the same pen of sows or switching boars back and forth between two pens of sows. The first method is easier, the second method is more effective. Alternating boars once or twice a day between sow pens seems to stimulate rebreeding and more complete coverage of gilts.

How About The Use Of Breeding Crates?

Breeding crates are useful when large size differences exist between the sow and boar. Some breeders use crates for all matings. Crates also help when artificial insemination is practiced.

Is Artificial Insemination Practical For Swine?

Artificial insemination (A.I.) is being used successfully by many pork producers. A.I. is being used primarily to (1) overcome size differences between boar and sow, (2) extend boar-power when sows are synchronized, (3) breed sows to boars located at another location, and (4) breed sows to injured boars.

Most producers who use A.I. collect semen from their own boars and use it within 24 hours. Technology is available for short term storage (4-5 days) of liquid semen. Boar semen has been successfully frozen and stored, but the technique must be further perfected before it can receive widespread use.