The care of the breeding sow

P C. Beck
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THE CARE OF THE BREEDING SOW

By P. C. BECK, Field Assistant, Dairying Division

PIG-RAISING is a specialised field of animal production, which, to be profitable must incorporate both a scientific and a practical approach. These two factors must be complementary, for without a sound practical approach, the value of the scientific principles involved, e.g., in breeding and compounding rations would accordingly be reduced.

Husbandry in respect to pig-raising could broadly be defined as a closely-adjusted combination of breeding, feeding, housing and general management. Good husbandry is only achieved through an efficient combination of each of these units.

The selection and care of the breeding sow and her litter is one phase of pig-raising which requires a high standard of husbandry if the best results are to be achieved.

BREEDING

Many factors are involved when the term breeding is used. Firstly, it means the selection of breed. This must initially be governed by the type of pig the pig raiser wants to breed and the adaptability of the breed to a particular set of environmental conditions. The wide variation in climates experienced in this State warrants some thought in this direction.

For instance, it has been observed that under the normal and in some cases harsh conditions of management in the northern wheatbelt areas, the purebreed Berkshire and also its crosses with the other breeds have a superior growth performance and appear more healthy than the average purebred Large White under the same conditions. This would appear to arise from the lesser ability of the Large White to withstand the hot climate in these areas.

Upon selecting the breed the next important consideration must be the selection of individuals from which the pig-raiser will breed.

Purebred animals whose ancestors reveal records of prolificacy, that is the ability to produce large litters, should be selected. Rapid growth rates are of great
economic significance, and the ability to produce the type of carcass which meets market demand is most important. Selection must take into account conformation and constitution of the sow, preferably at the baconer stage of growth, when the sow’s progeny will usually be marketed.

Fig. 2.—Excellent types of Berkshire sows with high litter-bearing capacity

Heritable defects, such as hernia, blind, inverted or irregularly-spaced teats, under or over-shot jaws must be avoided. The sow and also the boar should reveal 12 or more well developed, evenly-spaced teats which extend well forward on the underline. Do not tolerate any tendency towards weakness in the legs of breeding stock, particularly in the pasterns which should be strong and as straight as possible.

THE SOW

The sow throughout her productive life fulfils a monumental task. She is expected to produce six or more litters. In each case from when the sow conceives she must carry her litter for a gestation period of about four months, deliver them safely, and then proceed to suckle and rear the litter for a period of two months until the piglets are weaned. During each of these reproductive cycles the sow must not

Fig. 3.—Mated Berkshire gilts in excellent condition

only carry the responsibility of the litter, but maintain her own health and body condition and also remain free of disease.

To enable her to produce the best possible results, the sow must receive a great deal of care and good management. Perhaps the foremost consideration is to see that she maintains her bodily health. This should be done by feeding correctly at a level of nutrition which is in relation to the period of the breeding cycle into which the sow is about to enter. Her bodily food reserves must be sufficient to meet forthcoming demands, in particular, the carrying of the unborn litter, while at
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the same time maintaining the condition which will enable here to produce well during her period of lactation.

**THE MAIDEN SOW**

It is very important that maiden sows be given the opportunity to develop fully during her period of lactation.

If this is the case it is advisable to wait for a period of three weeks before mating. During this period she should be fed well and brought back to a firm but fleshy body condition, and then mated. If a sow is excessively fat, a light diet should be provided to slim her down until approxi-

**Fig. 4.—Summer shade is most important for breeding sows**

before being mated for the first time. When the gilt is eight to nine months old and well-grown (weighing approximately 250 lb. liveweight) she may be introduced to the boar. It has been frequently observed that sows when mated in an undeveloped condition have not grown to maximum size and their capacity to rear subsequent large litters is reduced.

**BODY CONDITION BEFORE MATING**

The sow, after her litter has been weaned, will often be in a thin condition. mately a week before service is due. The feeding rate should then be increased as a means of “flushing”—to achieve a greater release of ova and increased litter size. The practise of flushing in the case of all sows before mating is highly desirable.

**MATING**

The pig-raiser in the normal course of observation of his breeding sows soon becomes aware of the signs which indicate the sow is “in season.” The period of heat or oestrus lasts, on an average, about two
days and it is generally recommended for best results, that the sow be served about 24 hours after she comes "in season." This may not always be accurately observed however and a good practical recommendation would be to mate the sow on the morning after she is initially observed on heat. It is usually sufficient, if the boar has covered the sow for a period of three to five minutes to concede that the service has been successful. The practise of allowing the sow to remain with the boar for several hours is unnecessary. However, if the boar is used infrequently he may become temporarily sterile and a second service is desirable in this case. Introducing the sow again to the boar approximately 10 to 12 hours later should overcome this.

If possible from a practical point of view, it is desirable to remove the sow, after service, to a pen of her own where she should remain quietly for a period of about 12 hours. This practice enhances the prospect of the service being effective. The interval between heat periods is normally 21 days. If the sow does not return to service at the end of 21 days she may then be regarded as being in pig.

**FEEDING AND CARE DURING GESTATION**

This is a most important phase as it has a great bearing on the sow's ability to nurture the unborn litter and thus on the health and vigour of the litter when born. In addition the milk supply after farrowing is very much dependent on feeding and husbandry during the gestation period.

The sow must not be allowed to become low in condition, and overfatness must also be avoided as it can result in difficult presentation and possibly piglet deaths at farrowing.

At this stage the main concern is to maintain the sow in good condition and free from disease. This process must begin directly the sow's former litter has been weaned and she has been remated. Feeding at this stage should be designed to bring the sow rapidly into a firm but fleshy condition so that the body reserve of food is built up early in the gestation period. Once this condition has been achieved the ration must be adjusted so as to retain this condition until farrowing. Building up the body food reserve in the initial stages of gestation is a good plan.

Much of this reserve will be drawn on by the unborn litter, especially in the latter stages of pregnancy, but there should still be sufficient to ensure a good milk supply after farrowing.

The pig-raiser should remember that heavy feeding during the late pre-farrowing period can cause trouble and piglet losses due to sows farrowing with congested or overstocked udders.

Exercise and grazing, preferably of green material are very essential for the in-pig sow. Exercise helps to maintain health, and grazing provides many of the essential minerals and vitamins required by the pregnant sow. During the summer when green material is not readily available a Vitamin A supplement should be added to the ration. The provision of a protein-rich meal (meatmeal) in the diet is necessary and a calcium supplement usually in
the form of limestone fines is also essential. Plenty of trough space for in-pig sows is important to ensure that jostling and fighting does not occur, and ample fresh, clean water must be available at all times. The average in-pig sow, depending on condition and size will consume in the vicinity of 6 lb. of meal or its equivalent daily.

The provision of shade in the summer and warm housing in the winter are most beneficial to the health and well-being of the sow.

Fig. 7.—Moving one of the portable sheds to fresh ground

**PREPARATION BEFORE FARROWING**

The sow should be introduced to her farrowing quarters not less than a week to ten days before she is due; this practice enables her to become accustomed to the new surroundings and gives her ample time to settle in before giving birth to her litter. During this time the sow should still be allowed to exercise outside. The eradication of external parasites such as lice should be carried out prior to farrowing.

A bedding of straw in which the sow can make a nest must be placed in the farrowing house. If this becomes soiled and damp, immediate replacement with fresh material is necessary.

Constipation of the sow at farrowing is a condition which must be avoided as it may lead to difficulties at birth which can result in the death of piglets. To prevent this occurring food of laxative nature should be incorporated in the ration shortly before farrowing. Bran mash is an excellent material in this case.

**FARROWING**

The sow in the act of giving birth to her piglets does not normally meet with any difficulties if she is in good condition and has been fed and managed well throughout pregnancy. It is not necessary to maintain a constant watch over her during farrowing. The exception may be the valuable sow who may be known to be clumsy and inclined to meet with some difficulty. Disturbing the sow at this time may cause her to become nervous or irritable with possibly a subsequent loss of piglets or injury to herself. A sound practice is to look occasionally to see that nothing abnormal has occurred. After the foetal membranes or “afterbirth” have been passed they should immediately be removed and preferably burnt or buried.

**CAUSES OF PIGLET MORTALITY**

The period from birth to weaning and in particular the first few days in the life of the piglet are the most vital. It is
during this period that the greatest likelihood of mortalities exists. There are a number of varied reasons for these deaths, many of which can be prevented by care and attention.

The most common cause of piglet mortality is trampling or overlaying by the sow. This is a factor which the pig raiser can control to a certain extent through good husbandry. He can assist by ensuring that his sows are not over fat and clumsy and by providing safety measures such as farrowing rails and hover boards which offset the clumsiness of the sow, plus artificial warmth in the form of infra-red ray lamps in a protected area where the young piglets may retreat into safety.

Chilling is another cause of death, which, if prolonged, results in a loss of vigour in the piglet which subsequently becomes so weak it is unable to move to a warmer area or to suckle the sow. Where crude, draughty and damp farrowing facilities exist, many deaths of this nature occur. Farrowing houses must be draught and moisture free, with, if possible, insulated concrete floors.

Diseases such as colds and pneumonia and also the common baby piglet scours also contribute to the heavy losses of young pigs.

Good sanitation with adequate drainage of excess moisture, clean bedding and clean feeding facilities are highly necessary.

Inflammation and congestion of the sow's udder with loss of the milk supply at farrowing is a source of trouble predisposing to piglet deaths through starvation. This condition may even aggravate the sow to the extent of her savaging her litter.

This condition can be obviated by a high standard of management and feeding throughout pregnancy and especially at the farrowing period.

Other losses are incurred through accidents, and many piglets are destroyed as runts or because of malformations and abnormalities.

A high standard of management and feeding of the sow, throughout the whole of her gestation period and at farrowing, in association with well designed farrowing quarters will greatly assist in reducing the high mortality rates.

FEEDING OF LACTATING SOW

During the early period of its life the young piglet lays the foundation of bone and muscle tissue which will eventually develop into the finished carcass. One of the basic requirements for economic growth and high carcass quality is well-

Fig. 8.—The intake of solid food by young growing pigs is highly important

grown weaners. To achieve heavy weaning weights, the early growth potentiality must be given every opportunity to develop to its full capacity.

For the first few weeks after birth the young pigs rely solely on the sow's milk, and it is most important that this natural and highly nutritious food be available in abundant supply. To ensure this, the sow must be fed according to two main factors—her own body condition and the number of piglets in the litter.

Firstly, after farrowing, it is desirable to withhold food from the sow for about 12 hours, although plenty of water must be available, then, a light diet containing
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about 50 per cent. bran mash if constipation is apparent should be supplied.

During the first week after farrowing a ration of 4 to 5 lb. per day of a high protein meal should be provided. This meal is compounded at the rate of 15 lb. meatmeal (50 per cent. protein), 1 lb. limestone fines, ½ lb. salt, per 100 lb. crushed grain, to give approximately an 18 per cent. protein content. Subsequently, during the following two weeks this ration may be gradually increased until the sow is cleaning up readily enough food to keep her in good health and maintain her milk supply. The actual amount consumed depends on the number of piglets in the litter and the sow's condition, and it is only by careful observation that the feed requirements can be arrived at. A good guide however, is to feed on the basis of 2 lb. for the sow plus 1 lb. of meal for each pig in the litter. For instance if a sow has a litter of eight pigs she may be provided with 10 lb. of feed in two feeds daily. It is considered however, that 12 lb. is the maximum rate on this basis which of course is subject to variation depending on the condition of the sow.

CREEP FEEDING

Approximately three weeks after farrowing, the sow's milk supply reaches a peak and her production then begins to decrease. In addition the nutritional requirement of the young pigs is rapidly increasing. It is at this period that creep feeding of the litter must commence. Creep feeding simply means that the young pigs are provided with solid food in an area which is accessible only to themselves and which excludes the sow.

The creep feeding ration is designed to supplement the sow's milk supply, and as such to ensure rapid growth. The ration must therefore be palatable and rich in protein which is most essential for the proper development of muscle tissue. A ration compounded of 15 lb. meatmeal (50 per cent. protein), 1 lb. limestone fines, ½ lb. salt per 100 lb. of crushed grain has a protein content of approximately 18 per cent. and will be found suitable in the creep feeding ration. The feed must be available to the piglets at all times. It is most undesirable, however, to allow stale food to accumulate or feeding troughs to become dirty, as these factors readily cause digestive troubles and scouring. Fresh clean water must be available at all times.

During the period up to weaning it is desirable to allow the sow and litter free grazing for exercise and access to valuable minerals and vitamins which are available through this medium. If this is not possible the piglets should be given a sod of fresh clean earth from a pig-free area every day or so. In particular this will ensure that the piglets are receiving a regular supply of iron, which is deficient in the sow's milk.

WEANING

Weaning is normally carried out when the litter is eight weeks of age. It is a very critical period and must be managed with care and consideration. In separating the sow and litter it is important that the young pigs remain in the pen and surroundings they have become accustomed to and the sow should be removed. If the sow is a heavy milker, her ration should be reduced four or five days before weaning to assist the drying-off process.

If weaning is carried out with care and the young pigs are readily consuming solid food, and castration of males has been carried out well beforehand at three to four weeks of age there should be no reason for growth rates to be retarded to any extent. Any setback received at weaning has detrimental effect on the subsequent growth and development of lean meat on the carcass. With this in mind, pig-raisers would be well advised to exercise good care when weaning pigs to ensure that their growth rate is maintained at a high level.

Economy of production must be the aim of every pig producer. The selection, management and feeding of the sow and her litter plays a major role. The production of large rapidly-growing pigs of the correct type means greater profits and to achieve this the pig-raiser must realise the importance of his breeding sows.