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ADDITIONAL FACTS IN SWINE FEEDING WITH SPECIAL REFERENCE TO DEVELOPING SWINE FOR BREEDING PURPOSES

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INTRODUCTION

In 1904 an investigation was started, the purpose of which was to determine the food requirements of growing and fattening swine.

In December, 1908, Circular No. 126, entitled "Food Requirements of Growing and Fattening Swine," and in October, 1909, Circular No. 133, entitled "Feeding the Pig," were published. Both of these had special reference to feeding pigs for market and gave some of the principal facts deduced from the data up to that time. Since then the work has continued.

It is the object of this circular to give some of the principal facts that have been determined since the publication of Circular No. 133, with particular reference to the feeding of pigs that are intended for breeding purposes.

PROTEIN

Breeding pigs.—The indications are that pigs which are to be developed for breeding purposes should be fed less protein per hundred pounds live weight daily than those that are intended for market. The experiments seem to show that pigs which are to be developed for breeding purposes should start with .5 pound of digestible crude protein daily per hundred pounds live weight when two months old. This should be increased to .55 pound during about seven weeks, then reduced to .45 pound during the next four weeks, and then during the following seven or eight weeks they should be fed .5 pound of digestible crude protein per hundred pounds live weight daily. Following this there is another four weeks period of reduction from .5 pound to .35 pound and then another seven or eight weeks period of feeding .4 pound. Thus the reduction continues till the hog reaches maturity at two years of age when only about .2 pound of digestible crude protein is necessary as a daily allowance per hundred pounds live weight.

Market pigs.—As stated in the above mentioned Circulars, the market pig when it is two months old gets .6 pound of digestible crude protein daily per hundred pounds live weight. This is gradually increased during the next seven weeks to .7 pound. Following this there is a reduction from .7 to .6 pound during four weeks time. During the next seven weeks the pigs get .65 pound of digestible crude protein daily per hundred pounds live weight. This is reduced to about .3 pound during the next four weeks at which point it remains constant till the pigs are in prime condition for market when eight months old.

WATER

Breeding pigs.—Pigs that are to be developed for breeding purposes should have about 13 pounds of total water daily per hundred pounds live weight when they are two months old. This includes the water contained in the feeds used in the ration as well as the water that is used as water. This quantity of water is gradually reduced so that when the pig is eight months old it is getting 9 pounds of water daily per hundred pounds live

weight. Following this the amount of water in the ration should remain somewhere between 8 and 10 pounds daily per hundred pounds live weight.

Market pigs.—In the above mentioned Circulars the amount of water fed to pigs that are grown and fattened for market, starting with the pig when it is two months old and having it in prime condition for market at eight months of age, decreases gradually from 12 pounds to 4 pounds of water daily per hundred pounds live weight. This, however, does not include the water contained in dry feeds. The latest data shows that this should be slightly modified as follows. The amount of water at the beginning including that of the feeds should be the same as for pigs that are to be developed for breeding purposes, namely, 13 pounds. But this should decrease to 10 pounds at five and one-half months of age and after this decrease to 5 pounds at eight months of age, with the pig in prime condition for market. Thus the decrease is not in a straight line as previously but the amount fed is relatively higher at about the middle of the feeding period.

CARBOHYDRATE

Breeding pigs.—The amount of carbohydrate fed to pigs that are being developed for breeding purposes should be somewhat lower than is fed to market pigs, so as to prevent them getting too fat. They should get approximately 2.2 pounds at the beginning which should be increased to 2.4 pounds during the third to the sixth month inclusive. Following this it should be decreased so as to keep the pigs in the desired breeding condition.

Market pigs.—As stated in the above mentioned publications, market pigs that are fed during the same period as mentioned above for breeding pigs should have 2.4 pounds of digestible carbohydrate daily at the beginning which should be increased gradually to 2.8 pounds. After this they are kept just below full feed.

In the following table an approximate ration has been calculated according to the above mentioned system of feeding. This shows the amounts of certain farm feeds and of water necessary to supply the required amount of protein, carbohydrate and water per hundred pounds live weight for breeding pigs at different ages. This, however, has been arranged only by monthly periods and is simply to serve as a guide. In order to feed pigs to the best advantage their ration should be calculated each week so as to conform to the changes in age and live weight.

AN APPROXIMATE RATION FOR PIGS INTENDED FOR BREEDING PURPOSES

Feeds	Pounds of feed per 100 pounds live weight per day							
	Age of pig in months							
	2	3	4	5	6	7	8	
Corn.....	2.7	2.8	2.9	2.9	3.0	3.3	2.9	
Soy beans (seed).....	.4	.5	.4	.4	.4	.4	.7	
Skim-milk.....	6.0	6.0	6.0	6.0	6.0	.0	.0	
Water.....	7.1	6.4	5.7	5.1	4.4	9.2	8.5	

In the above suggested approximate ration if the feeds mentioned are not available substitutions may be made. By using different feeds and different quantities of the same feeds, there are an infinite number of combinations that may be made, all of which may be good. If corn is not available, rye, barley, wheat, rice, etc., may be used instead. If soy beans are not at hand, oil meal may be substituted, or peas may be used but the quantity must be increased as peas do not contain as much protein. This would also increase the carbohydrate hence the corn would have to be correspondingly decreased. Or these may be left out and more skim-milk added. Some of the protein may also be supplied in the form of clover or alfalfa. If skim-milk is not available more of some other nitrogenous feed may be supplied and also more water as milk is 85 to 90 percent water. If tankage containing 60 percent protein is used in place of soy bean meal much less will suffice, as tankage is richer in protein.

The above is intended for dry lot feeding. If pigs are on pasture these quantities should be somewhat reduced. If the above ration is used in a dry lot a little bran or shorts used in place of part of the corn so as to give the ration more bulk will improve it. A greater variety of feeds will probably also make the ration better.