

Director's Digest



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Lard Fights Piglet Mortality

Animal fat may be the key to increasing the survival of newborn pigs, according to recent investigations in swine nutrition being conducted by Dr. R. W. Seerley at the University of Georgia and supported by the Fats and Proteins Research Foundation.

The high mortality rate of newborn pigs has been a prevalent nutritional problem for a long time. In 1973 over twenty-two million pigs died between parturition and weaning. Numerous attempts have been made, with only partial success, to devise a remedy for the fatal symptoms of weakness, failure to nurse and chilling. Most of these early studies focused on blood sugar levels or liver glycogen as the probable metabolic energy sources for young piglets and tried to improve piglet strength with carbohydrates. It is now becoming increasingly evident that such carbohydrate sources may be unavailable metabolically to the newborn piglet and that early piglet development might be more dependent upon lipids.

Indeed, Dr. Seerley has shown that the feeding of lipids to nursing sows increases piglet survival. His feeding trials compared changes in carcass quality, composition and piglet survival of ten nursing sows fed basal diets supplemented with either corn starch or corn oil. Neither dietary supplement affected overall daily gains or metabolic energy level of the sows' milk. The noteworthy change was that the milk of sows receiving the corn oil supplement had higher percentages of oleic acid and that their piglets had higher survival rates. These favorable results suggested to

Professor Seerley that lipids with higher oleic acid levels, such as animal fat, might be preferable to vegetable oils. His present feeding trials using lard are substantiating this hypothesis. Nursing sows that receive lard supplements show milk fatty acid patterns similar to those fed corn oil with the exception of elevated oleic acid levels and slightly improved piglet survival rates. Further research, to begin some time this year, will study the effects on piglet survival by feeding lard to sows prior to farrowing and during lactation. An attempt will also be made to determine in more detail, which fatty acids are most essential to early piglet development.

In summary, the research at the University of Georgia indicates that animal fat contains a spectrum of fatty acids which is particularly accessible metabolically to the newborn pig and that animal fat supplementation of the nursing sow's diet is a suitable means of transferring energy to the young pig. Although these studies are still in progress, it appears that animal fat will be an important ally for swine nutritionists in the fight against piglet mortality.