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FAT ADDED TO SOW GESTATION DIETS

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Baby pigs are born with a minimal store of usable energy, primarily in the form of fat and glycogen. These stores are rapidly depleted after birth. It is generally thought that less than 15% of liver glycogen, which is the most important store for usable energy, is present 24 hours after birth.

The pig relies totally on milk from the sow to provide nutrition. It is critical that the pig nurse as soon after birth as possible to replenish the rapidly depleting energy stores.

Attempts to improve the baby pig's energy stores have centered around increasing the energy intake of the dam during late gestation and early lactation.

Work at South Dakota and other stations has shown that adding fat to the gestation diet increases baby pig survival. In contrast, other research has not shown any advantage in sow and/or litter performance between sows fed fat and control fed sows.

Several research reports at the American Society of Animal Science meeting held in Tucson, Arizona, during the past summer concentrated in the area of high energy versus low energy diets for sows during gestation. L. T. Frobish, U. S. Department of Agriculture, reported no significant difference for first litter gilts in total number of live pigs farrowed and number of pigs at 14 days postpartum nor the weight of these pigs when a high energy versus a low energy ration was fed. R. D. Boyd, University of Nebraska, summarized four trials involving 188 litters which were conducted to determine the effect of feeding diets supplemented with tallow (0 to 8%) and choline chloride (220 or 770 mg/kg diet) prior to parturition and during lactation on pig survival and growth.

No significant differences were observed for any of the comparisons between tallow, choline chloride and tallow x choline chloride. The rate of survival was high for all treatment groups and only a slight advantage was realized with supplemental tallow.

In a review paper, J. E. Pettigrew, Moorman Manufacturing Company, said a lack of dietary energy has been cited as a factor in pig mortality. A summary of many trials indicated a 2.5% increased survival rate with added fat, he said. Fat helped the most in herds with a naturally low survival rate but will not help much where survival rates are above 80%, Pettigrew said. There was a 4.1% improvement in the low survival groups and only 1% in the over 80% classification.

Before adding fat to sow diets producers should consider the following: High levels of fat (5 to 15%) in diets can cause mechanical handling and mixing problems because they do not flow as freely and may bridge in bins and feeders. Fat is usually expensive in relationship to corn.

The addition of fats to sow diets in late gestation may under certain conditions increase pig survival and also fat content of milk, but not in all cases. Consider economics and potential feed handling problems for your present program before making a decision.