FATS AND PROTEINS RESEARCH FOUNDATION, INC.

Director's Digest

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UTILIZATION OF FAT AND FIBER IN SWINE DIETS

The second paper published by Drs. Schoenherr, Stahly and Cromwell was entitled "The Effects Of Dietary Fat Or Fiber Addition On Energy And Nitrogen Digestibility In Lactating, Primiparous Sows Housed In A Warm Or Hot Environment".

Below is the abstract of the paper. There is not a lot of data that you can use from this project but should be kept for future reference.

"Thirty primiparous sows were individually penned in a thermoneutral (20°C) or hyperthermal (32°C) enviroment and fed a high-starch (corn-soybean meal basal), high-fiber (48.5% wheat bran) or high-fat (10.6% choice white grease) diet from d 100 of gestation through a 22-d lactation to determine the effects of thermal environment and dietary energy source on energy and N digestibility in lactating sows. Voluntary feed intake and total feces and urine output were determined from d 12 through d 14 postpartum. Heat exposure (32°C) depressed ($P<.05$) voluntary feed, ME and N intake and lowered ($P<.05$) apparent daily N retention. Heat exposure did not alter ($P>.15$) digestibility, expressed as percentage of intake, of dietary energy or N. Dietary additions of wheat bran depressed ($P<.05$) the proportion of gross energy retained as ME by 12 and 14 percentage units and the apparent digestibility of N by 2.5 and 4.5 percentage units at 20 and 32°C, respectively, compared with those of the basal diet. Dietary additions of choice white grease did not alter ($P>.15$) energy digestibility but increased ($P<.05$) the proportion of N digested and retained in both environments. Apparent ME of the wheat bran, corn-soybean meal mix and choice white grease (determined by difference) was 2.72, 3.70 and 8.43 Mcal/kg DM and was independent of thermal environment. Digestibility of fibrous and starchy feedstuffs was similar in lactating sows and growing pigs allowed to consume feed ad libitum, whereas fat was more digestible in the sows."