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RESTRICTED-FEEDING VERSUS SELF-FEEDING SOWS DURING PREGNANCY

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An experiment was designed to compare the performance of sows during pregnancy when self-fed a bulky ration or limit-fed a higher energy ration. In the fall of 1964, second litter sows were self-fed and housed together during the breeding period. After the breeding period, the sows were divided and one group was self-fed and the other group was limit-fed 5 lb. per head daily. Limit-fed sows were given their feed once daily in open troughs. Self-fed sows had access to a round metal feeder at all times. Water was fed ad libitum and pasture was available to both groups. The two rations are shown in table 1.

In the spring of 1965, gilts were self-fed a bulky ration prior to and during breeding, then they were divided into the self-fed group and limit-fed group. They farrowed their second litter on the same study, also.

Table 1. Composition of Rations

Ingredients	Self-fed	Limit-fed
	lb.	lb.
Shelled corn	535	1310
Oats	600	200
Alfalfa hay	700	200
Soybean meal (44%)	130	240
Dicalcium phosphate	20	36
T.M. salt	10	10
Vitamin-antibiotic premix ^a	10	10
	<u>2005</u>	<u>2006</u>

^a Premix provided 6 million U.S.P. units of vitamin A, 600,000 U.S.P. units of vitamin D₂, 4 gm. of riboflavin, 10 gm. of pantothenic acid, 30 gm. of niacin, 200 gm. of choline, 20 mg. of vitamin B₁₂, 6 gm. of penicillin and 30 gm. of streptomycin per ton of ration.

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Results

A summary is shown in table 2. Self-fed sows ate nearly 9 lb. of feed per day during gestation for the three periods. In the first and third periods (winter) sows ate 9.6 and 10.0 lb. per day, whereas first litter gilts ate only 7.4 lb. per day during the summer when pasture was plentiful. The average daily feed consumption of self-fed sows in all periods was nearly 4 lb. more than the quantity fed to limit-fed sows. The difference in feed cost was approximately 11 cents per day or \$8.80 per sow for each 80-day period.

There was some variation in the number of pigs farrowed and weaned between treatments within each farrowing-lactation period, but the difference in the number of pigs farrowed and weaned was small when the three periods were combined.

Birth weight of pigs in the limit-fed group was slightly heavier than those in the self-fed group in all three periods. This difference is not important and, in fact, it is surprising because limit-feeding usually decreases the birth weight of pigs. The level of feeding was relatively high and permitted optimum fetal development.

Self-fed sows averaged 18 lb. more weight gain than the limit-fed sows during the 80-day period. The gilts in the second farrowing were not weighed. The limit-fed sows were in good condition at farrowing and they were in good condition at weaning time, so the excess condition of the self-fed sows was not beneficial.

The results of this experiment illustrate that self-fed sows consume more nutrients than necessary for good reproduction. A considerable quantity of feed can be saved and the cost of producing pigs can be decreased by limit-feeding sows. The 5 lb. per head daily level of feeding was adequate for good reproductive performance. There is adequate evidence at several experiment stations to show that lower levels of feeding will support good reproduction.

Table 2. Results of Three Gestation-Lactation Periods

Farrowing period	Method of feeding	No. of sows	Av. daily feed, lb.	Av. live pigs per litter	Av. birth wt., lb.	Av. no. pigs weaned	Begin- ning wt., lb.	Far- rowing wt., lb.	Wt. gain, lb.
Spring 1965 (Second litter sows)	Limit-fed	7	5.00	12.57	3.11	9.43	408	485	77
	Self-fed	7	9.62	11.14	2.93	7.43	416	511	95
Fall 1965 (First litter gilts)	Limit-fed	10	5.00	9.40	3.16	7.30	--	--	--
	Self-fed	11	7.39	9.64	2.92	7.73	--	--	--
Spring 1966 (Second litter sows)	Limit-fed	11	5.00	9.45	3.13	8.82	408	480	72
	Self-fed	10	10.00	11.10	3.03	9.10	431	522	91
Average of three gestation-lactation periods									
	Limit-fed	28	5.00	10.21	3.13	8.43	408	482	74
	Self-fed	28	8.92	10.54	2.97	8.14	425	517	92