

South Dakota State University
**Open PRAIRIE: Open Public Research Access Institutional
Repository and Information Exchange**

South Dakota Swine Field Day Proceedings and
Research Reports, 1966

Animal Science Reports

1966

Effect of Restricted Feeding in Gravid Sows

R.W. Seerley
South Dakota State University

R.D. Magstadt
South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/sd_swine_1966

Recommended Citation

Seerley, R.W. and Magstadt, R.D., "Effect of Restricted Feeding in Gravid Sows" (1966). *South Dakota Swine Field Day Proceedings and Research Reports, 1966*. Paper 3.
http://openprairie.sdstate.edu/sd_swine_1966/3

This Report is brought to you for free and open access by the Animal Science Reports at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in South Dakota Swine Field Day Proceedings and Research Reports, 1966 by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

EFFECT OF RESTRICTED FEEDING ON GRAVID SOWS

R. W. Seerley and R. D. Magstadt¹

Restricted-feeding of sows has been widely accepted as a method of feeding during pregnancy. However, the best level of feeding during specific phases of the pregnancy period has not been well established.

This study was initiated to compare two schemes of feeding the same ration, but the total quantity of feed consumed during pregnancy was the same between the two treatment groups.

Experimental Procedure

Eight Hampshire and eight Yorkshire gilts were allotted into two equal groups. Four of each breed were in each pen and most were paired littermates. The sows were housed on brome pasture and fed in individual stalls to control feed intake. Both groups were fed the ration shown in table 1, but the quantity was controlled according to the schedule in table 2. Each sow in each group was fed approximately 505 pounds of feed during the 114 day gestation period.

Table 1. Composition of Ration

Ingredient	Percent
Gr. yellow shelled corn	65.5
Gr. oats	10.0
Dehydrated alfalfa meal (17%)	10.0
Soybean meal (44%)	12.0
Dicalcium phosphate	1.8
Trace mineralized salt	0.5
Vitamin-antibiotic premix ^a	0.2

^a Added 2270 U.S.P. units of vitamin A, 224 I.C. units of vitamin D, 4 mg. of riboflavin, 8 mg. of pantothenic acid, 18 mg. of niacin, 20 mg. of choline chloride, 6.6 mcg. of vitamin B₁₂ and 5 mg. of chlortetracycline per pound of ration.

The sows were weighed at the start of breeding, 70 days later, on the 109th day of pregnancy, and 1 day and 3 weeks after farrowing. The pigs were weighed at birth and at 3 weeks of age at the time of weaning. Pigs were given a strength score at birth. The value ranged from 1 to 5, weak to strong, respectively.

¹ Department of Animal Science, South Dakota State University.

Table 2. Levels of Feeding Prior To, During, and After Gestation

Feeding scheme	Lot 1 Lb./day	Lot 2 Lb./day
Prebreeding	4.0	4.0
2 weeks before to 1 week after breeding (3 weeks)	5.0	5.0
To 70 days pregnancy	4.0	3.0
To 93 days pregnancy	5.0	4.0
To term	5.0	9.0
Lactation	Full-fed	Full-fed

The sows farrowed two litters; the first litters were farrowed in September, 1965, and the second litters in March, 1966.

Results and Discussion

Three sows in each group in the first farrowing failed to provide complete data (table 3). These sows either aborted or farrowed stillborn or weak pigs. The cause of the problem could not be determined. Abortion or weak pigs at birth did not occur with the other animals on the trial or with other sows in the herd. All of the sows were Hampshire and they had been bred to a related sire, thus a problem in genetic relationship was possible. Four of these six sows were littermates.

In the second farrowing, three Yorkshire sows and one Hampshire sow farrowed litters in lot 1 and four Yorkshire sows and two Hampshire sows farrowed litters in lot 2. Two sows in lot 1 and one sow in lot 2 did not conceive. The remaining sows were out of the experiment for reasons such as death and injury on ice. All sows failing to farrow normal litters in this study were not included in the tabulated data because the problems did not appear to be related to the feeding levels.

The sows in lot 1 were heavier at the start of breeding than the sows in lot 2, but they gained about the same weight in each group during their first pregnancy. However, the sows in lot 1 gained more than sows in lot 2 in their second pregnancy.

The data on the pigs from the two treatment groups were consistent between the two farrowing-lactation periods. One exception was that sows in lot 1 farrowed smaller pigs in the first pregnancy, whereas they farrowed larger pigs than sows in lot 2 during their second pregnancy. Differences observed between the two groups of sows were small. Litter size at birth was about the same in both groups, but more pigs in group 2 died during the lactation period. The higher death loss of pigs in group 2 occurred in both the first and second litters. The higher death loss in group 2 is surprising because these were exceptionally strong pigs at birth and they had a slight average (both pregnancies) weight advantage over pigs in group 1.

More animals are needed to make any conclusions about these levels of feeding. The trial will be repeated to provide more observations on each treatment.

Table 3. Results of the Two Pregnancy-Lactation Periods

	First pregnancy		Second pregnancy		Av. of both pregnancies	
	Lot 1	Lot 2	Lot 1	Lot 2	Lot 1	Lot 2
No. of sows	8	8	7	8		
No. of sows farrowing	5	5	4	6		
Wt. at start of breeding, lb.	323	290	418	418		
Wt., 70 days later, lb.	374	344	471	452		
Wt., 109 day gestation, lb.	405	376	534	500		
Wt., 2nd day post farrowing, lb.	356	329	482	455		
Wt., 3 weeks post farrowing, lb.	346	316	435	411		
Av. no. live pigs per litter	10.60	10.80	10.20	10.66	10.44	10.72
Av. birth wt., lb.	2.25	2.68	2.94	2.72	2.55	2.70
Av. strength score	4.05	4.96	4.85	4.93	4.40	4.90
Av. litter size, 3 weeks	9.20	8.40	9.25	8.66	9.22	8.54
Av. 3 week wt., lb.	12.1	12.7	14.2	16.0	13.0	14.5
Av. stillborn and mummified pigs at birth	0	0	0.25	0.83	0.11	0.45