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EFFECT OF PREFARROWING DIETARY TREATMENT ON PIG PRODUCTION

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A method of increasing birth weight and pig survival rate at weaning is desirable because of the large pig death losses normally occurring during the first week after farrowing. Several management schemes are suggested using commercial products to improve this situation. The study reported herein was designed to test suggested management schemes.

Experimental Procedure

Thirty-four crossbred sows and gilts were allotted to the three prefarrowing and lactation treatments on the basis of parity, weight and ancestry. The allotment took place 30 days before the first sow was due to farrow and the farrowing occurred over a 21-day period.

All sows received 6 lb. of gestation feed until they farrowed and then were allowed ad libitum consumption of the lactation diet during the 3-week lactation period. The composition of the gestation and lactation diets is shown in table 1.

The three treatments supplied through these diets were:

1. Control - gestation and lactation diets with no feed additives
2. XLP-30 - 1 gram of dichlorvos (Atgard C) per sow per day for 28 days prior to farrowing and no additives in the lactation diet
3. Neo-Terra - 150 grams of Terramycin plus 150 grams of Neomycin per ton of feed fed 14 days prior to and 14 days after farrowing.

Results

Table 2 shows a summary of the results obtained from the prefarrowing and lactation treatments. The data in the table include only sows which successfully weaned pigs. The data from three sows and their litters were not included in both the control and XLP-30 groups because the sows experienced severe mastitis and lost all pigs before weaning.

Due to chance in allotment, differences in number of pigs at birth existed between treatment groups. These differences also were observed at 10 and 21 days of lactation. Similar survival rates were found between treatments with a slight advantage for the control group. (Survival rate heavily favored the Neo-Terra group when all litters were considered.)

Litter weights reflected the differences in number of pigs per litter at farrowing, although average pig weights at birth were similar among groups. However, the Neo-Terra sow group produced the heaviest pigs at 10 and 21 days of age.

In this trial no advantage in birth weight or survival rate of pigs born alive was observed due to pre-farrowing treatments. The number of litters involved was small, however, and additional research is in progress to generate enough information to make a valid comparison of the treatments involved.

Summary

Thirty-four crossbred sows were allotted to pre-farrowing and lactation treatments including a control treatment, an XLP-30 treatment and a Neomycin-Terramycin treatment. The study involved small numbers of litters and no differences were seen in pig birth weights or pig survival rates. Pig weaning weights favored the Neomycin-Terramycin group.

Table 1. Composition of Diets (Percent)

Ingredient	Gestation	Lactation
Ground yellow corn	77.6	68.5
Soybean meal (48%)	--	18.0
Soybean meal (44%)	9.0	--
Dehydrated alfalfa meal	10.0	--
Ground beet pulp	--	10.0
Dicalcium phosphate	2.3	2.0
Limestone	.5	.8
Trace mineralized salt (.8% zinc)	.5	.5
Vitamin premix ^a	.1	.1

^a To supply per lb.: vitamin A, 2000 IU; vitamin D, 200 IU; vitamin E, 2.5 mg; riboflavin, 1.25 mg; pantothenic acid, 5 mg; niacin, 8 mg; choline, 25 mg and vitamin B₁₂, 5 micrograms.

Table 2. Pig Weight and Survival Rates As Affected by Treatment

	Sow treatments		
	Control	XLP-30	Neo-Terra
Number of sows ^{a,b}	8	8	12
Number of pigs			
Stillborn	1.0	1.0	1.9
Birth	10.7	8.9	8.5
10 days	8.7	6.9	6.0
21 days	8.3	6.1	6.0
Percent survival	78	69	71
Litter weight, lb.			
Birth	31.2	26.0	25.7
10 days	50.0	36.3	38.9
21 days	85.6	63.2	70.0
Pig weight, lb.			
Birth	3.0	3.0	3.1
10 days	5.8	5.8	6.5
21 days	10.5	10.9	11.6

^a Data from three litters from the control group and three litters from the XLP-30 groups were not included because the sows suffered severe mastitis and all pigs were lost.

^b Control = 5 sows, 3 gilts; XLP-30 = 6 sows, 2 gilts; Neo-Terra = 8 sows, 4 gilts.