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DDVP (Shell Dichlorvos) for Pregnant Sows

B.A. Koch and R.H. Hines

Most recent laboratory and research station reports have indicated that 2,2 - dichlorovinyl dimethyl phosphate (DDVP) (Shell Dichlorvos) fed at low levels to pregnant sows in late gestation favorably affects newborn pigs. A field study we reported last year showed no favorable effect among over 200 litters. More than 600 barrows were checked at slaughter and no difference was detected in slaughter age between pigs from treated or untreated sows.

Trials reported here involve sows and gilts in the K-State research swine herd. Trial 1 was those farrowing in March; trial 2, those farrowing in May.

Design and Results

Trial 1:

Sows and gilts in the March farrowing were maintained separately in outside lots, and individually fed between 5 and 6 pounds of a 16% protein corn-soy ration daily. Approximately 30 days before the first female was to farrow, the groups were randomly assigned to either Dichlorvos treatment or control, and marked for identification. Individual weights were recorded then.

Thereafter females were fed the usual amount of feed in individual stalls (Becker), with each receiving an additional pound of feed (Dichlorvos or no Dichlorvos) as a top dressing.

Treated females continued to receive 800 mg. of Dichlorvos (active ingredient) per day until they farrowed. All females were moved into the farrowing house 5 to 10 days before they farrowed. Data collected are summarized in table 1.

Trial 2:

Sows and gilts bred to farrow in May were handled exactly as those farrowing in March. Data collected are summarized in table 2.

Summary

Feeding 800 mg. (active ingredient) Dichlorvos daily for approximately 30 days before farrowing caused no significant change in any measured factor.

Table 1. March farrowing, response to Dichlorvos (800 mg./day).

<u>Treatment group</u>	<u>Control</u>	<u>Dichlorvos</u>
No. of females:	20	20
Sows	10	9
Gilts	10	11
Av. wt. at start of treatment, lbs.	414	431
Av. no. days on Dichlorvos	---	28
Av. wt. into farrowing house, lbs.	462	473
Av. no. pigs farrowed per litter	10.5 $\pm$ 0.3*	9.7 $\pm$ 0.5*
Av. no dead at farrowing	0.6	0.6
Av. no. mummies farrowed	0.2	0.1
Av. birth wt., lbs.	2.8	2.9
Av. 28-day wt., lbs.	13.7	13.8
Av. litter size at 28 days, No.	8.6 $\pm$ 0.4*	7.8 $\pm$ 0.4*
Av. weaning age, days	42	46
Av. sow wt. at weaning, lbs.	447	470
Av. sow wt. change in farrowing house, lbs.	-15 $\pm$	-3 $\pm$
Av. sow wt. change from initial treatment to weaning, lbs.	+33	+39

*Standard error of mean.

Table 2. May farrowing, response to Dichlorvos (800 mg./day).

Treatment group	Control	Dichlorvos
No. of gilts	9	9
Av. wt. at start of treatment, lbs.	406	399
Av. no. days on Dichlorvos	---	36
Av. wt. into farrowing house, lbs.	457	467
Av. no. pigs farrowed per litter	7.8 $\pm$ 0.8*	7.8 $\pm$ 1.0*
Av. no dead at farrowing	0.4	0.2
Av. no. mummies farrowed	0.0	0.2
Av. birth wt., lbs.	3.3	3.3
Av. 28-day wt., lbs.	13.0	13.5
Av. litter size at 28 days, No.	6.3 $\pm$ 0.9*	6.8 $\pm$ 1.0*
Av. weaning age, days	45	46
Av. sow weight at weaning, lbs.	413	412
Av. sow wt. change in farrowing house, lbs.	-44	-55
Av. sow wt. change from initial treatment to weaning, lbs.	+7	+13

* Standard error of mean.