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DDVP (Shell Dichlorvos) for Weanling Pigs

B.A. Koch and R.H. Hines

Recent reports indicate that a low level (25 parts per million of active ingredient) of 2,2 dichlorovinyl dimethyl phosphate (DDVP) increases growth of weanling pigs.

The trial reported here was designed to measure such response in pigs from Dichlorvos-fed sows and also in pigs from sows not receiving Dichlorvos during late pregnancy.

Design and Results

Weanling pigs weighing approximately 25 pounds each (56 from control sows and 56 from treated sows) were allotted according to previous treatment, weight, litter and sex into 8 groups of 14 pigs each. Four groups (2 from control sows and 2 from treated sows) were fed a control ration and four similar groups were fed the same ration plus 25 p.p.m. of Dichlorvos.

Pigs were housed in the nursery during the first two weeks of the feeding period. Fourteen pigs occupied each 5' x 11' pen, equipped with an automatic waterer and a two-hole self-feeder. Floors were concrete slats over a pit in which liquid circulated. After two weeks the pigs were moved to the growing-finishing building for the remainder of the test. Then 14 pigs occupied a 6' x 15', slatted-floor pen.

Replicate 1 went on feed April 24, 1969, and weighed off June 26. Replicate 2 went on feed May 12, 1969, and weighed off July 14. The ration was in meal form as Dichlorvos will not tolerate heat generated during pelleting.

Summary

Adding 25 parts per million of Dichlorvos to rations of weanling pigs from either control sows or Dichlorvos-fed sows had no significant effect on average daily gain, feed efficiency or daily feed intake.

Table 3. Starter ration used in dichlorvos feeding trial

Ration no.	S-103	S-103S
Gadolinium sorghum grain, lbs.	332	332
Gadolinium yellow corn, lbs.	330	330
50% protein soybean meal, lbs.	300	300
Gadolinium limestone, lbs.	10	10
Dicalcium phos., lbs.	14	14
Salt	5	5
Trace minerals (Z-5), lbs.	1	1
Vit. D (15,000 I.U.) gm.	30	30
Vit. A (10,000 I.U.) gm.	200	200
B-complex (Merck 1233), gm. ¹	454	454
B ₁₂ (Proferm 20), gm.	454	454
Aurea-SP 250, gm.	1136	1136
DDVP compound, gm.	<u>---</u>	<u>57</u>
Total, lbs.	1000	1000
Proximate analyses, %, ²		
Moisture	12.2	
Crude protein	19.7	
Ether extract	2.7	
Crude fiber	2.9	
Ash	4.7	

1 - Contains 80 gms. of choline chloride; 24 gms. of niacin; 8 gms. of riboflavin, and 16 gms. of D - pantothenic acid per pound.

2 - Courtesy of Kansas State University grain science and industry analytical laboratory.

Table 4. Performance of weanling pigs fed low levels of Dichlorvos.

Dam of Pigs:	<u>Control sows</u>		<u>Dichlorvos sows</u>	
Diet of Pigs:	Control	Dichlorvos*	Control	Dichlorvos
<u>Av. daily gain, lbs.</u>				
Replicate 1	1.31 + .05**	1.27 + .04	1.22 + .04	1.26 + .04
Replicate 2	<u>1.23 + .04</u>	<u>1.29 + .06</u>	<u>1.38 + .03</u>	<u>1.24 + .04</u>
Av.	1.27	1.28	1.30	1.25
<u>Av. daily feed, lbs.</u>				
Replicate 1	3.03	3.08	2.70	3.07
Replicate 2	<u>3.04</u>	<u>3.19</u>	<u>3.61</u>	<u>3.16</u>
Av.	3.04	3.14	3.16	3.12
<u>Av. feed eff., feed/lb. gain</u>				
Replicate 1	2.50	2.42	2.05	2.43
Replicate 2	<u>2.34</u>	<u>2.47</u>	<u>2.62</u>	<u>2.54</u>
Av.	2.42	2.44	2.34	2.48

* 1 pig died on day 4 of the feeding period.

** Standard error of the mean.