1972

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A.S. Series 72-35

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Synchronizing all farrowings to a certain day or days of the week should allow closer attention to sows farrowing as well as sufficient time to disinfect facilities between farrowings. These procedures could result in the loss of fewer pigs at or near birth.

Dexamethasone is a corticosteroid which has been demonstrated to possess abortive inducing capabilities in cows and ewes. This substance, in precise dose levels, will induce parturition within approximately 40 to 48 hours after injection in pregnant cows and ewes near term. Its capabilities have not been evaluated in the pregnant sow.

The objective of this study was to evaluate the use of dexamethasone for inducing and controlling the time of parturition in the sow.

Experimental Procedure

Forty-nine crossbred gilts and sows with known breeding dates were stratified according to age across a 2 x 3 factorial arrangement of treatments. Experimental treatments consisted of two different days of receiving an injection (day 110 or 112 of pregnancy) and three levels of dexamethasone (0, 10 or 20 mg.). The experimental design and number of sows per treatment are presented in table 1.

The 0 mg. dexamethasone treatment group received an injection of sterile saline, while the 10 and 20 mg. groups received dexamethasone in sterile saline solution. All injections were given intramuscularly.

Results and Discussion

The intervals from injection to birth of the first pig are presented in table 2. There were no significant differences ($P > .10$) between levels of dexamethasone within days of injection. Based on these data, it is concluded that 10 or 20 mg. of dexamethasone will not induce parturition in the pregnant sow. These data are in contrast with reports of 20 mg. dexamethasone inducing parturition in cows and ewes.

There also were no significant differences ($P > .10$) between treatments for interval between birth of first and last pig (table 3) or percent pigs born alive of total pigs born (table 4).

Summary

The use of dexamethasone for controlling the time of parturition in sows was evaluated on 49 head of crossbred sows. Intramuscular injections of 0, 10 or 20 mg. of dexamethasone failed to induce parturition in sows 110 to 112 days pregnant.

Table 1. Experimental Design and Number of Sows Per Treatment

Day of pregnancy when injected	Level of dexamethasone, mg.		
	0	10	20
		No. of sows	
110	10	5	10
112	11	4	9

Table 2. Influence of Dexamethasone on the Interval from Injection to Birth of the First Pig (Hours)

Day of injection	Level of dexamethasone, mg.		
	0	10	20
110	90.5±9.4[a]	103±11.2	89.9±14.4
112	46.5±8.5	67±11.6	56.3± 9.8

[a] Mean ± standard error.

Table 3. Influence of Dexamethasone on the Intervals from Birth of the First to Last Pig (Hours)

Day of injection	Level of dexamethasone, mg.		
	0	10	20
110	2.9±0.4	5.4±1.8	3.2±0.8
112	2.7±0.5	3.2±0.7	2.7±0.5

Table 4. Influence of Dexamethasone on Percent Pigs Born Alive of Total Pigs Born

Day of injection	Level of dexamethasone, mg.		
	0	10	20
110	91.1%	93.6	98.5
112	98.2	89.6	98.1