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Allyl Trenbolone to Control Estrus in Gilts - Effect of Dose

D. L. Davis, J. L. Nelssen, and J. M. Robl

Introduction

Replacement gilts frequently do not fit smoothly into existing breeding and farrowing schedules because time of estrus cannot be predicted. Being able to program replacement gilts into a breeding herd would improve management, so we investigated the effectiveness of a synthetic progestogen, allyl trenbolone¹, to control estrus in gilts. Allyl trenbolone is not presently available to swine producers.

Summary

Sixty gilts were fed different levels of allyl trenbolone for 18 consecutive days (0, 10, 12.5, 15, 17.5, or 20 mg/day). Occurrence of estrus was best controlled when 15 mg or more was fed (28 of 30 gilts first exhibited estrus 4 to 6 days after the last allyl trenbolone feeding). Allyl trenbolone seemed to promote cystic follicle formation at the 10 and 12.5 mg/day levels, but higher daily doses prevented this side-effect.

Procedures

Sixty crossbred and Yorkshire gilts, which had exhibited at least one estrous cycle, were randomly assigned to the experimental groups. Gilts were housed in outside lots and fed in groups of three or four. Allyl trenbolone was either included in the daily ration, or fed in one pound of feed before the remainder of the diet was fed. In the latter case, the remainder of the ration was not fed until the feed containing allyl trenbolone had been consumed. Gilts were fed a complete gestation diet and allyl trenbolone was included in the diet for 18 consecutive days.

Ovaries of all gilts were examined at surgery according to the following schedule: gilts exhibiting estrus were examined within 10 days after they were first detected in estrus, and gilts not exhibiting estrus by 10 days after their last progestogen feeding were examined at that time.

Results and Discussion

Allyl trenbolone was very effective in controlling the occurrence of estrus (table 3). Forty-three of 50 treated gilts were first detected in heat between four and six days after the last progestogen feeding. The 10 and 12.5 mg doses seemed to promote cystic follicle development; however, doses of 15 mg/day or greater prevented this side effect.

¹Roussel Uclaf, Paris, France.

These results suggest allyl trenbolone can be used to regulate the estrous cycle of gilts. Further trials will characterize fertility after treatment.

Table 3. Effect of Dose of Allyl Trenbolone on Estrus and Ovulation in Gilts

No. of gilts	Allyl trenbolone (mg/day)					
	0	10	12.5	15	17.5	20
Assigned to each group	10	10	10	10	10	10
Exhibiting estrus	10	7	8	10	10	9
Exhibiting estrus between 4 and 6 days after last progestogen feeding	--	7	8	10	9	9
Having more than 2 cystic follicles	0	2	1	0	0	0