

OESTRUS AND OVARIAN ACTIVITY IN GILTS INDUCED INTO EARLY PUBERTY
BY THE INTRODUCTION OF MATURE BOARS

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The sudden introduction of mature boars can stimulate early puberty in gilts grown with castrate contemporary males (Brooks and Cole 1970). How this phenomenon is influenced by growing with entire male contemporaries is unknown. With the trend towards production of entire male bacon pigs this question needs answering.

From 100 days of age 2 groups of 32 Large White/Landrace gilts were grown in contact with either entire or castrated male contemporaries. At 160 days of age 16 gilts from each group were introduced to mature' boars and the rest remained isolated. The ovaries of each gilt were examined by laparoscopy to ensure that the animals were prepubertal. All animals were checked daily for oestrus and these data were used to describe the pattern of attainment of puberty. Following the detection of oestrus, gilts were laparoscoped to determine ovarian activity.

TABLE 1: Mean \pm SE Weight, age and ovulation rate at first oestrus and ovulation.

Pre 160 days/Post 160 days	Wt.(Kg)	Age (days)	O.R. (CL's animal)
A Castrate male/No Boars n = 11	106.2 ^a * \pm 2.45	215.4 ^a \pm 4.21	10.3 ^a \pm 0.30
C Entire male/No Boars n = 13	94.8 ^b \pm 2.68	198.6 ^b \pm 3.30	10.2 ^a \pm 0.38
B Castrate male/Boars n = 9	80.8 ^c \pm 2.05	181.6 ^c \pm 5.52	9.2 ^b \pm 0.32
D Entire male/Boars n = 10	77.9 ^c \pm 1.12	183.0 ^c \pm 7.71	8.3 ^c \pm 0.30

* Within each variable, means not annotated by the same superscript are significantly different $P < 0.01$.

When gilts remained isolated from mature boars those grown with entire males (C) reached puberty earlier than those grown with castrates (A). However, the rearing conditions did not affect the age'at puberty of gilts introduced to mature boars. Groups B and D both reached puberty earlier than their isolated counterparts but their ages at puberty did not differ from each other. The ovulation rate at puberty in the "no boar" groups (A) and (C) were similar despite the differences in age and weight between them. However, the data indicate that rearing conditions which include the presence of entire males may depress ovulation rate when boars are used to induce early puberty.

The advantages of earlier puberty following contact with boars are offset by lower ovulation rates at the first cycle and the fact that rearing conditions may further influence ovulation rate has important implications for the management of young gilts for early productivity.

BROOKS, P.H. and COLE, D.J.A. (1970). J. Reprod. Fert. 23:435.

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