EFFECTS OF CONFINEMENT AND PASTURE ON SWINE PERFORMANCE AND CARCASS QUALITY

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Although the commercial pigs operations in Brazil are using total confinement during the growing-finishing phases, in some regions or in some conditions of price of land and facilities, there is an economical possibility of using pasture system for growing finishing pigs.

Forty pigs (two groups of twenty) were used to compare the effects of confinement and pasture on performance and carcass quality.

All pigs were fed "ad libitum" with commercial rations containing 16 and 14% of crude protein in growing (19.4 to 59.4 kg live weight) and finishing (59.4 to 95.9 kg live weight) periods, respectively.

The confined animals were kept in concrete floored pens an the animals in pasture were kept in fields of Cynodon dactylon.

No significant difference (P/.05) due to treatments were observed for performance and carcass quality. However pigs on pasture showed non significant increase in average daily gain (0.708 x 0.683 kg) and daily feed intake (2.40 x 2.27 kg). Non significant decrease was observed for feed efficiency (3.38 x 3.31) dressing percentage (74.6 x 75.4), ham percentage (30.0 x 30.9), loin muscle eye area (30.8 x 32.5 cm2) and non significant increase for backfat thickness (4.05 x 3.87 cm).

Table 1. Performance results

Performance	Confinement	Pasture	Dif.%
Growing (19.4-59.4 kg)			
- ADG (kg)	0.701 (a)	0.649 (a)	8.0
- DFI (kg)	1.99 (a)	1.90 (a)	4.7
- FE	2.85 (a)	2.94 (a)	3.1
Finishing (59.4-95.9 kg)			
- ADG (kg)	0.665 (a)	0.782 (b)	17.6
- DFI (kg)	2.60 (a)	2.99 (a)	15.0
- FE	3.91 (a)	3.83 (a)	2.0
Total period (19.4-95.9 kg)			
- ADG (kg)	0.683 (a)	0.708 (a)	3.7
- DFI (kg)	2.27 (a)	2.40 (a)	5.7
- FE	3.31 (a)	3.38 (a)	2.1

ADG = Average daily gain (kg)
DFI = Daily feed intake (kg)
FE = Feed efficiency
(a)(b) = Means in the same line bearing different superscripts are significantly different (P/.05).

Table 2. Carcass traits results

Carcass traits	Confinement	Pasture
Dressing percentage	75.4	74.6
Ham percentage	30.9	30.0
Carcass lenght (cm)	101.4	101.1
Backfat thickness (cm)	3.87	4.03
Loin muscle area (cm2)	32.5	30.8

CONCLUSIONS

Although the differences were not statistically significant (P/.05) the results permited some conclusions:

1) During the growing period the confined animals showed better performance than the pigs on pasture.
2) During the finishing period the animals on pasture showed better performance than the pigs in confinement.
3) During the total period the confined pigs showed better feed efficiency and the animals on pasture showed better gain of weight.
4) The carcass quality was not significantly affected but the confined animals showed a slightly better carcass.

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