

USE OF POULTRY BY-PRODUCT MEAL AND FEATHER MEAL AS PROTEIN  
SOURCE FOR GROWING-FINISHING PIGS\*

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Two trials were carried out to study the levels of poultry by product meal and feather meal as protein source for growing-finishing pigs.

In the first trial 24 castrated male Large White x Landrace pigs were allotted to 4 treatments:

T1 - Corn soybean meal diet containing 16 and 14% crude protein in the growing and finishing phases respectively.

T2 - Diet containing 3% of poultry by-product meal, 16-14% CP.

T3 - Diet containing 6% of poultry by-product meal, 16-14% CP.

T4 - Diet containing 9% of poultry by-product meal, 16-14% CP.

In the second trial 24 castrated male Large White x Landrace pigs were allotted to 4 treatments:

T1 - Corn-soybean meal diet containing 16 and 14% crude protein in the growing and finishing phases, respectively.

T2 - Diet containing 2.5% of feather meal - 16-14% CP.

T3 - Diet containing 5.0% of feather meal - 16-14% CP.

T4 - Diet containing 7.5% of feather meal - 16-14% CP.

In both experiments the animals were kept in groups of 2 in concrete floored pens in total confinement. The pens were washed daily. The rations and the water were given "ad libitum". The experimental design was that of randomized blocks.

The results of trial 1 and 2 are shown in Table 1 and Table 2.

Table 1. Performance results - Experiment 1

Phase		Treatments			
		T1	T2	T3	T4
Growing	ADG	0.752	0.790	0.761	0.779
	DFI	1.86	2.07	2.03	2.00
	FE	2.49	2.59	2.69	2.55
Finishing	ADG	0.866	0.901	0.910	0.909
	DFI	2.95	3.12	3.04	3.01
	FE	3.40	3.47	3.35	3.32
Total Period	ADG	0.800	0.836	0.824	0.834
	DFI	2.35	2.52	2.45	2.42
	FE	2.95	2.99	3.00	2.90

ADG = Average daily gain (kg)

DFI = Daily feed intake (kg)

FE = Feed efficiency

No significant differences were observed for treatments.

Table 2. Performance results - Experiment 2

Phase		Treatments			
		T1	T2	T3	T4
Growing	ADG	0.760	0.684	0.669	0.682
	DFI	2.20	2.06	1.96	2.17
	FE	2.89	3.01	2.93	3.18
Finishing	ADG	0.712	0.769	0.684	0.705
	DFI	2.81	2.90	2.76	2.80
	FE	3.97	3.78	3.72	3.99
Total Period	ADG	0.737	0.725	0.685	0.691
	DFI	2.51	2.48	2.36	2.48
	FE	3.41	3.42	3.34	3.58

ADG = Average daily gain (kg)

DFI = Daily feed intake (kg)

FE = Feed efficiency

No significant differences were observed for treatments.

At the end of the trials the carcass quality was evaluated by measuring dressing percentage, ham percentage, carcass length, back fat thickness and loin muscle area.

#### CONCLUSIONS

The results allowed the following conclusions:

- 1) The use of poultry by-product meal resulted in non significant increase in gain of weight and feed intake.
- 2) The use of feather meal resulted in non significant decrease in gain of weight and feed intake.
- 3) Poultry by-product meal did not significantly affect the carcass quality as measured by dressing percentage, ham percentage, carcass length, backfat thickness and loin muscle area.
- 4) Feather meal resulted in significant decrease ( $P < 0.05$ ) in loin muscle area, but no significant effect was observed for dressing percentage, ham percentage, carcass length and backfat thickness.

#### SELECTED REFERENCES

- BLAIR, R., 1974. Feedstuffs. Minneapolis, 46 (39):19.
- COMBS, G.E.; W.L. ALSMEYER & H.D. WALLACE, 1958. J. Anim. Sci. 17:468-472.
- DROCHNER, W., 1979. Nut. Abst. and Reviews. 49:87.
- GONZÁLEZ, P.E. & A. AGUILERA A., 1966. Técnica Pecuária em México. 7:32-33.
- KRONKA, R.N. & M. RECKER, 1968. Boletim de Indústria Animal. 25:211-215.

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