

A PRELIMINARY STUDY OF DEFATTED RICE BRAN IN THE DIETS OF PIGS AND RATS

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There are limited data on the nutritional value of defatted rice bran for monogastric animals. The effects of feeding diets containing different amounts of defatted rice bran to pigs and rats were examined in experiments described here.

Thirty male Landrace x Large White pigs of mean liveweight (W, kg) 19.3 ± 1.4 were allocated to 5 diets (Table 1) and grown to 45 kg. Feed allowance (g/d) was $120 W^{0.75}$. Weanling rats (5/group) were offered ad libitum the same diets for 18 d.

The diets were a commercial pig-grower diet (Fielders Stockfeed, Tamworth) substituted with defatted rice bran (186 g CP/kg, 11.2 MJ DE/kg) and wheat bran (Table 1). Standard analytical procedures were used to determine chemical composition of the diets.

TABLE 1 Diet composition (g/kg), determined analysis and production parameters

Group	1	2	3	4	5
Basal	1000	897	794	691	794
Defatted rice bran		100	200	300	
Wheat bran					200
Vitamin and mineral mix		3	6	9	6
Digestible energy (MJ/kg DM)	14.5	14.1	13.8	13.5	13.8
Crude protein (g/kg DM)	200	199	195	193	194
Acid detergent fibre (g/kg DM)	73 ^a	75 ^a	82 ^b	83 ^b	89 ^c
<i>Pigs:</i> Days to 45 kg W	48	47	43	44	46
Liveweight gain (g/d)	534	544	587	571	547
FCR	2.3	2.3	2.2	2.2	2.3
<i>Rats:</i> Liveweight gain (g/d)	3.4	3.7	3.7	3.3	3.2
Feed intake (g/d)	12.3 ^a	13.8 ^a	13.5 ^a	13.0 ^a	11.6 ^b
FCR	3.6	3.8	3.7	4.0	3.7

* Values within a row without any, or with a common superscript (a-c) are not significantly different ($P > 0.05$).

There were no differences ($P > 0.05$) in growth rate or FCR of pigs or rats on any diet. However differences approach significance ($0.1 > P > 0.05$) for pig growth between diets 1 and 3. Differences ($P \leq 0.05$) in dry matter (DM) intake of rats were observed. This was in part due to spillage and ingredient selection particularly on diet 5 containing wheat bran. This latter diet also contained the highest amount of ADF (89 g/kg).

It appears that defatted rice bran at up to 30% of the diet can support an acceptable growth rate in pigs and rats without an adverse effect on FCR. There is some indication from both rat and pig growth rates that the inclusion of defatted rice bran at 20% of the diet may be optimal.

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