

Evaluation of solvent extracted canola meal for weaner pigs between 6 and 23 kg liveweight

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Canola meal is not used extensively in weaner pig diets because of the potential adverse effects on palatability, feed intake and digestibility of diets containing canola meal. However new cultivars of canola seed with low erucic acid and glucosinolate levels are now being extensively grown in Southern Australia. This experiment examined the maximum inclusion level of solvent extracted canola meal in weaner pig diets commensurate with optimum growth performance. Forty-nine male crossbred pigs were weaned at 19.6 ± 0.2 days of age and 6.27 ± 0.17 kg BW and allocated on a liveweight basis to seven diets containing 0, 50, 75, 100, 150, 200 and 250 g/kg solvent extracted canola meal for the subsequent 42 days. The experimental diets were offered *ad libitum* and were formulated to contain similar amounts of DE (14.7 MJ/kg) and essential amino acids.

	Level of canola meal (g/kg)							sed	Significance ¹	
	0	50	75	100	150	200	250		L	Q
ADG (g/d)	354	402	379	413	412	411	431	40	0.074	0.569
Feed intake (g/d)	584	584	575	601	601	598	619	52	0.426	0.850
FCR	1.65	1.45	1.55	1.47	1.47	1.46	1.43	0.07	0.008	0.139

¹sed= standard error of the difference between any two means; L=linear effect of canola meal; Q=quadratic effect of canola meal

Canola meal contained 372 g CP/kg, 21.8 g lysine/kg, 25 g crude fat/kg and 4 μ moles glucosinolates/g. The relatively low level of glucosinolates in canola meal failed to adversely affect the growth performance of weaner pigs. There was no significant difference in either ADG or voluntary feed intake of pigs offered diets containing up to 250 g/kg of canola meal, between 20 and 62 days of age. However there was a significant linear response in FCR indicating that as the level of canola meal increased, feed efficiency was improved. The reason for this improvement is FCR is not readily explained as the diets were equal in DE content and contained 0.8 g available lysine/MJ of DE and appropriate ratios of other essential amino acids which were considered adequate for weaner pigs. The net energy content of canola meal may have been underestimated and consequently the diets containing the higher levels of canola meal may have had higher NE contents, which would have accounted for the observed improvement in feed efficiency. Investigation into the efficiency of utilization of energy in low glucosinolate canola meal warrants further investigation if canola meal is included at high levels in pig diets. Our results suggest that weaner pigs can tolerate levels of solvent extracted canola meal up to 250 g/kg, in diets from weaning at 20 days of age until 62 days of age without adversely affecting growth performance.

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