

AN EVALUATION OF WINERY POMACE FOR GROWING PIGS

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Winery pomace (WP) consists of grape skins, seeds and stalks and is the waste by-product from alcohol production where grape marc from wine pressings is fermented to produce fortifying spirit (Williams and Strauss 1978). WP is low in energy, high in acid detergent fibre (50%) and varies in crude protein from 11.2 to 13.6%, probably due to residual yeast.

Five least-cost diets were formulated for growing pigs using the recommendations of ARC (1981). Dried hammer-milled WP was incorporated into a basal diet at 5%, 10%, 15% and 20%. Chromic oxide (0.1%) was added to each diet to determine dry matter digestibility.

Thirty Large White X Landrace boars were grown from 20 to 45 kg. They were fed individually in a piggery (21°C ± 2°C) with ad libitum drinking water and stratified into five dietary treatment groups (Table) each with six pigs. The amount of feed offered once daily was adjusted weekly according to live-weight so that all the pigs were offered similar amounts of digestible energy (DE). Results are shown in the Table.

TABLE Growth rate, feed conversion ratio (FCR), dry matter digestibility (DMD) and analysis of diets

	Winery pomace				
	0%	5%	10%	15%	20%
Growth Rate (g/d)	554a [†]	555a	530ab	532ab	503b
FCR	2.44 ^a	2.40 ^a	2.61 ^{ab}	2.68 ^b	2.94 ^c
Apparent DMD (%)	77.7 ^a	80.4 ^a	72.2 ^b	67.3 ^c	65.0 ^d
Calculated:					
DE (MJ/kg DM)	15.1	15.2	14.7	14.2	13.7
Crude Protein (g/100g DM)	18.1	18.4	18.4	17.9	17.8
Crude fibre (g/100g DM)	4.3	4.0	5.4	6.8	8.3

[†] Means with common superscripts (a-d) in the same row are not significantly different (P < 0.05)

As the level of WP increased in the diet, growth rate and feed efficiency declined probably due to decreased DMD. One pig on the 15% WP diet refused to eat 16% of feed offered and WP may be poorly acceptable at high dietary levels.

It would appear that despite the reputation of WP as a poor quality feedstuff in part due to a high tannin content, it may be useful in pig diets in amounts of 10 - 15%.

ARC (1981). "The Nutrient Requirements of Pigs". (CAB: London).

WILLIAMS, P.J. and STRAUSS, C.R. (1978). *J. Sci. Fd. Agric.* 29: 527.

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