

Performance and Meat Quality as Affected by the Dietary Inclusion of Food Waste in Fattening Pigs

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Abstract

Nowadays, the use of food waste as an alternative source of energy in animal diets has gained considerable attention, because of the increasing needs of human population and the high prices of conventional arable based animal feeds. The aim of the present study was to investigate the effect of adding dried food waste (DFW) collected from hotels to the diet of fattening pigs. Twenty (20) castrated male pigs were allotted into two (2) dietary treatments ($n=10$ pigs per treatment), namely control (C) and DFW, balanced for body weight (BW; 50.3 ± 2.54 kg). In treatment C, pigs were fed a corn-soybean meal based diet without DFW, whereas in treatment DFW, a diet containing 100 g DFW/kg. Both diets were isocaloric and isonitrogenous and were formulated with similar digestible lysine, methionine+cystine and threonine contents. Feed intake and body weight were recorded to calculate BW gain and feed conversion ratio (FCR). At the age of 144-147 days, a digestibility trial was conducted to determine energy and nutrient digestibility. At the end of the trial (156 days of age), pigs were sacrificed to investigate treatment effects on carcass dressing percentage, as well as on meat quality indices (pH, colour, cooking loss and shear force). Overall, pigs performed well with a final body weight of 98.57 and 94.23 kg for treatments C and DFW, respectively. Average daily feed intake tended ($P=0.058$) to be lower and average daily gain was lower ($P=0.027$) in DFR compared to C pigs; however, FCR was not affected by the treatment. No differences in the digestibility of energy and nutrients were observed between treatments. Cold carcass dressing percentage did not differ between treatments and reached the optimum commercial values (77.0 and 77.7 % in treatment C and DFW, respectively). Meat color traits were also not affected by the dietary treatment. In conclusion, the results indicate that the dietary addition of DFW did not affect the feed utilization and the quality of the produced meat; hence, the use of DFR in pig feeding can be supported.

Keywords: food waste, pigs, growth performance, meat quality, digestibility

Acknowledgments: The research is funded by (LIFE 15 ENV/GR/0002057): "Food for Feed: An

Innovative Process for Transforming Hotels' Food Wastes into Animal Feed".