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Effect of Fermentable Liquid Diets Based on Wet Brewers Grains on Performance and Carcass Characteristics by Growing Pigs

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Abstract

Benefits of feeding fermentable liquid diets (FLD) include its positive effects on the gastrointestinal microflora and its potential to utilise byproducts from the food and brewing industry. Fermented liquid feed denotes a mixture of feed and water stored in a tank at a certain temperature and for a certain period of time before it is fed to the animals, and is characterised by high levels of lactic acid bacteria, yeasts, and lactic acid, low pH, and low enterobacteria counts. However, data on the effect of feeding FLD to growing pigs on growth performance is scarce. This study was conducted with the aim to evaluate growth performance and carcass characteristics of pigs fed a growing diet with graded levels of FLD based on wet brewers grains (WBG). Thirty two male pigs of the cross Landrace × York (32±4 days of age; 9.7±1.2 kg body weight) were allotted to one of the following treatment diets containing: 0, 15, 30 and 45 % WBG (dry matter basis). Animals were evaluated during three periods: post-weaning, growing and finishing. Individual weight of animals was recorded every 20 days and feed intake (DMI) by pen was recorded daily. When animals reached 95 kg of weight then were slaughtered and carcass characteristics were measured. The data were statistically analysed by one way analyses of variance using the GLM procedure of SAS, means were separated by the Tukey test. The average daily gain of pigs was significantly different among treatment groups being higher for the diet with 0 % WBG (660 g day⁻¹) followed by 15 % (553), 30 % (537) and 45 % (507), similar trend was observed for DMI (1895 g day⁻¹, 1881, 1823 and 1771, respectively). Moreover, carcass dressing was significantly different among treatments (71.5 %, 70.1, 68.9 and 67.8, respectively). Even though, growth performance was negatively affected by FLD, feeding costs were reduced even when the fattening period was longer. It is suggested that animals may be feeding with 30 % WBG diets in post-weaning periods and 30 or 40 % during growing and finishing periods.

Keywords: Carcass dressing, fermentable liquid diets, growing performance, growing pigs, wet brewers grains