The influence of diet on the development of swine dysentery upon experimental infection

The purpose of the present study was to evaluate the effect of fermented liquid food (FLF) and the addition of lactic acid to a diet based on wheat and barley on the development of swine dysentery in pigs experimentally infected with a Danish field isolate of Brachyspira hyodysenteriae. Furthermore, to confirm if low non-starch polysaccharide (NSP)-containing diets reduce swine dysentery the effect of different dietary levels of NSP and resistant starch (RS) was evaluated. These diets were based on cooked rice and animal protein, cooked rice and potato starch, cooked rice and wheat bran, or cooked rice and sugar-beet pulp. The experiment was designed as a randomized-block trial and was performed in triplicate including a total of 192 pigs. After feeding the diets for 2 weeks, six pigs in each group were challenged orally with B. hyodysenteriae and observed for another 4 weeks. After challenge, swine dysentery was observed in all feeding groups. The incidence of disease varied between 94% (rice/wheat bran) and 44% (FLF). The effect of diet on faecal shedding of B. hyodysenteriae was statistically significant (P...