

Title: "Effect of probiotics in the health and performance of nursery pigs raised in conventional or antibiotic/growth promoter free farms" – **NPB #02-197**

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Abstract: Probiotics are live cultures of nonpathogenic bacteria or yeast species that equilibrate intestinal microflora to the benefit of the animal. To investigate the potential and economic benefits of the use of probiotics in weaned pigs in high health status farms a trial was designed. Pigs receiving low doses of antibiotics throughout the nursery period were compared with pigs receiving probiotics (but no antibiotics/ growth promoters) at the same time with regard to their health status and performance. The product BioPlus 2B (Chr Hansen Inc., Denmark) containing *Bacillus licheniformis* and *B. subtilis* was included at the dose of 1 lb/T of complete feed. A total of 4,381 pigs allocated in 9 probiotic-groups and a total of 4,054 pigs allocated in 8 antibiotic groups participated in the trial. The average initial and end bodyweight of pigs was 13.13 lbs and 56.3 lbs for antibiotic-group, and 13.22 lbs and 55.3 lbs for probiotic-group, respectively ($p>0.05$). The average time in the nurseries was the same for both groups (43.5 days). The average daily gain, average daily feed intake and feed conversion ratio were 0.96 lbs, 1.40 lbs and 1.39 for antibiotic-group, and 0.93 lbs 1.33 lbs and 1.50 for probiotic-group, respectively ($p>0.05$). Feed cost per pig was US\$ 7.84 and 8.07, and feed cost per lb of bodyweight was US\$ 0.185 and 0.194 for antibiotic and probiotic groups, respectively ($p>0.05$). Mortality rate was 1.81% for antibiotic-group and 1.55% in probiotic group ($p=0.244$). It was concluded that in high health status farms, probiotics may substitute for antibiotics given for prevention of diseases.

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