

## BACILLUS SMITHII TBMI12 ENDOSPORES AS A POTENTIAL COMPONENT OF PROBIOTIC FEED ADDITIVE FOR PIGS

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**Abstract.** The purpose of this study was to show the safety of *Bacillus smithii* TBMI12 (*B. smithii* TBMI12) endospores for piglets. This paper describes safety and tolerance experiments with piglets. During the safety study, piglets from trial groups got a single dose of *B. smithii* TBMI12 endospores of  $10^8$ ,  $10^9$  or  $10^{10}$  CFU. Statistically significant changes among the microbiota of gastrointestinal tract did not occur compared with control and placebo group animals. During the tolerance study, a normal ( $10^9$  CFU) or overdose ( $10^{10}$  CFU) of endospores was administered every day to trial group piglets, but this did not damage the diversity of their microbiota. Both experiments showed that ingestion of *B. smithii* TBMI12 endospores had no negative influence on the weight gain of piglets. Based on those results, we suggest that endospores of *B. smithii* TBMI12 are safe for use as a component of a probiotic feed additive for pigs and this subject deserves further research.

**Keywords:** *Bacillus smithii*, probiotic, endospores, pigs.