The objective of the present review is to provide an overview on the effects of the addition of acidifiers to nursery pig diets. Researchers have proposed that dietary acidifiers decrease pH in the stomach and the lower gastrointestinal tract (GIT) of weanling pigs, and thus, protect the host from pathogenic invasion and proliferation and improve nutrient digestion. These benefits may subsequently result in improved growth performance of weanling pigs. In experiments on nursery pigs, dietary acidifiers decreased stomach pH at least to a small extent, but had little influence on the pH of the lower GIT. Studies found no observable changes in microbial populations upon providing weanling pigs with dietary acidifiers, but they found a slight reduction in lactobacilli or lactic acid-producing bacteria throughout the GIT. Dietary acidifiers improved protein digestion in many cases despite variable results regarding the digestibility of amino acids and improved growth performance. Such positive responses were more apparent during the first or second week of experiments than the later stages. However, growth responses were inconsistent among different sources and varying inclusion rates of acidifiers. Information on the dietary acidifiers’ mode of action is quite limited, and large variations exist in results regarding the effects of dietary acidifiers. Based on the present review, the benefit of dietary acidifiers for nursery pigs is not entirely convincing. Further research is required to clarify the acidifiers’ mode of action and its association with subsequent growth performance in weanling pigs.

Keywords
Acidifiers, gastrointestinal pH, growth performance, microbial population, nutrient digestion, weanling pigs.