

Humic acids of the WH67® type improve growth performance and feed intake of piglets

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Introduction

The intestinal health plays a central role in piglet rearing to achieve good growth rates. The breeding progress steadily increases the genetic growth potential of animals, but this advantage can not be used due to some limiting factors. During the last decade, the intestinal health developed to the first limiting factor. Thereby different parameters like bacterial as well as viral infections, inflammatory processes or even toxins have a massive influence on the intestinal health. These parameters have to be controlled.

Humic substances are a naturally occurring substance group, which, for example, are components of soils or brown coal. Humic acids are a special part of this substance group and can be described as high-molecular structures with phenolic core and in the periphery reactive groups. The WH Pharmawerk Weinboehla has been researching humic acids since the 1960s. The one used in the experiment, WH67® EG02, is based on selected humic acids, which are used today by the Pharmawerk Weinboehla and which are produced according to a patented production process. One aim of the experiment was to investigate the influence of humic acids of type WH67® on the growth performance of piglets under practical conditions.

Material and method

The experiment was carried out on a farm in northern Germany. At this farm about 1.000 breeding sows are kept and also the piglets are reared at the farm.

A total of 336 piglets were examined in the trial. The animals were divided into two groups and stabled 28 animals per box. In order to minimize gender effects, the groups consisted of 14 male and 14 female individuals.

The standard feed of the farm was used. The only difference between the groups consisted of the addition of the product WH67® EG02 to the experimental group. Thus, WH67® EG02 was mixed in feed 1 (day 1-14) with 0.3 %, 0.2 % in feed 2 (day 15-26) and 0.2 % in feed 3 (day 27-48).

The weights of the animals were recorded in single weights. For this purpose, on days 0, 14, 26 and 48 the weights of each piglet as well as the feed quantities per box were documented.

Results

Figure 1 shows the average daily weight gain of the piglets. It becomes clear that the piglets of the experimental group with WH67® EG02 have a significantly higher daily weight gain than the control group. The average daily weight gain in the experimental group has grown by 4.7 %. As a result the sale weight of the animals averagely increased of about 1 kg.

Figure 2 shows the results of the average feed intake during the rearing period. Also the feed intake of the piglets in the experimental group with WH67® increased significantly. It was about 4.9 % higher than in the control group.

Figure 1:

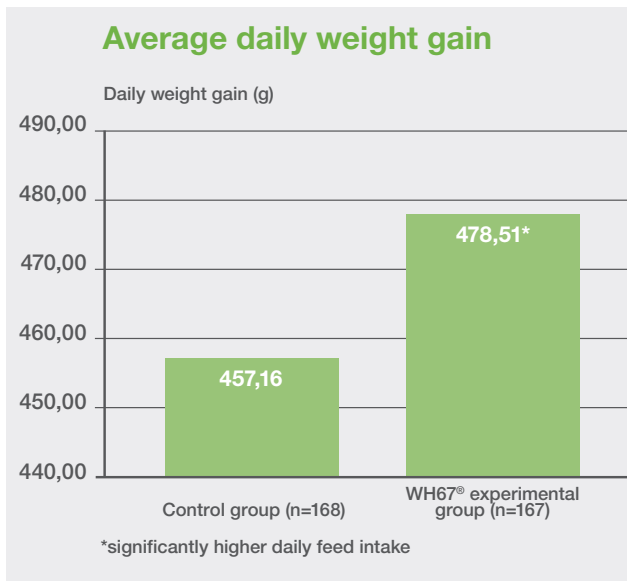
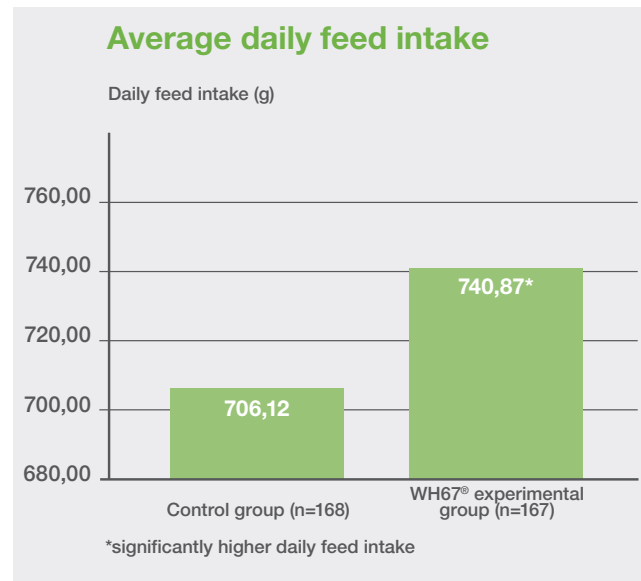


Figure 2:



Discussion and conclusion

From numerous investigations of the past it is known that the humic acids WH67® improve the intestinal health of humans and animals in a variety of ways. The current investigation has shown that an improvement of the intestinal health leads to an increase in growth performance and feed intake in piglets. Thus nutrients are better absorbed by a healthy intestinal wall, as it is the case with a damaged intestinal wall. But also the reduction of inflammatory processes, e.g. supported by endo-, entero- or mycotoxins, leads to additional energy being available to achieve higher growth rates.

In conclusion, it can be stated that the addition of WH67® EG02 even with an already very high performance level and an optimal health status of the animals improves the growth performance and feed intake significantly.

It is to be assumed that at farms at which the performance level is not as high as at the presented farm, the effects of WH67® EG02 are even higher.

Source: Luetke-Doerhoff, 2017: Influence of humic acids on the rearing performance and health of piglets; Bachelor thesis at the University of Osnabrueck; Published 28.06.2017