WELFARE & NUTRITION

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USE OF SELECTED HIGHLY DIGESTIBLE ANIMAL PROTEIN SOURCES IN WEANLING DIETS IMPROVES PIGLET PERFORMANCE AND INTESTINAL HEALTH FOR THE PRE-STARTER PERIOD

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POSTER

Introduction

High inclusion of vegetable protein in the diet can lead to protein fermentation and predispose for diarrhea in piglets. Therefore, the inclusion of highly digestible protein sources from animal origin is strongly recommended to overcome the inflammatory response of the intestinal mucosa. We hypothesized that a combination of hydrolyzed peptides of porcine intestinal mucosa (PDP) and animal plasma (AP) can exert a synergic effect in terms of performance and intestinal health.

Material & Methods

A total of 264 [(LDxLW)xPt] piglets were fed four different pre-starter diets (20.5%CP, 0-14d post-weaning) based on partial replacement of extruded soybeans in the diet by AP or a combination of AP and PDP. The same starter diet was offered from 14-35d post-weaning. No antimicrobials or therapeutic ZnO were used in feed. Animals were individually weighted at weaning and on d7, 14 and 35 post-weaning. The health status and mortality rate was daily assessed. Blood samples were collected on d7 post-weaning for TNF-alpha determination.

Results

Higher BW, ADG and better FCR was observed for the groups fed diets containing AP and AP+PDP at d7 and d14 and for the entire pre-starter phase (0-14d post-weaning). Moreover, TNF-alpha was lower for AP+PDP (88.6 pg/mL) than the Control group (112 pg/mL). Mortality was also lower for AP (0%) and AP+PDP (1.3%) than Control (4.5%).

Discussion & Conclusion

It is concluded that partial substitution of extruded soybeans by animal plasma or their combination with hydrolyzed peptides of porcine intestinal mucosa clearly improve early weaning-starter period on weanling performance and intestinal health.