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The advantage of ImmunoMax with specific IgY antibodies over plasma protein in Piglet nutrition.

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Introduction

Plasma protein is now frequently used in piglet feed to improve feed intake and growth as well as to reduce post-weaning diarrhea. However, plasma protein has several limitations such as high cost, containing mostly nonspecific highly digestible antibodies, and plasma has to be seen as a potential source of infectious diseases (Van Dijk et al. 2001).

Materials and methods

ImmunoMax plasma replacer is a new product based on highly digestible processed plant protein and several performance enhancing additive components and on IgY (yolk immunoglobulin), to replace plasma protein with 1:1 ratio. The IgY used in ImmunoMax have specific binding activity against several pig pathogens such as Porcine Rotavirus; transmissible gastroenteritis virus (TGEV); porcine epidemic diarrhea virus (PEDV); main E. coli types (K88, K99, 987P, F18, F41, K82, O141, etc), salmonella (typhimurium, choleraesuis, dublin, heidenberg..); clostridium perfringens (types A, C). ImmunoMax is designed to cover all previously mentioned limitations of plasma protein.

To evaluate the effect of ImmunoMax a 30-day field trial has been conducted, using 240 weaning piglets (26-27 day old) randomly devided in two replicates of 2 groups, with 60 piglets in each group and kept under equal housing and management conditions. The 1st group was fed the starter mesh feed diet containing 4% plasma protein, and the 2nd group was fed the same diet which contained containing 4% ImmunoMax to replace plasma protein (ratio 1:1).

Results and discussion

The results show similar final body weight (17.96 & 17.09 for ImmunoMax and 18.11 & 17.64 for plasma) and body weight gain ADG (361.38 & 365.18 for ImmunoMax vs 370.86 & 338.47 for plasma) in both groups and replicates. FCR of both repicates were statistically significantly improved in ImmunoMax groups (1.17 & 1.15 for ImmunoMax compared to 1.28 & 1.2 for the Plasma group). Diarrhea rate was also significantly improved in ImmunoMax groups (0% in the Immunomax group versus 2% & 6.6% in the Plasma groups). Also mortalities where reduced in the Immunomax groups.

In conclusion the use of 4% ImmunoMax in piglet feed replacing 4% plasma protein does not have an negative impact on pig performance. Feed cost savings at the time of the trial added to app 40 USD / mt of feed.

Refference

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