

Effect of Sc 47 probiotic yeast on the health and zootechnical performance of weaned piglets

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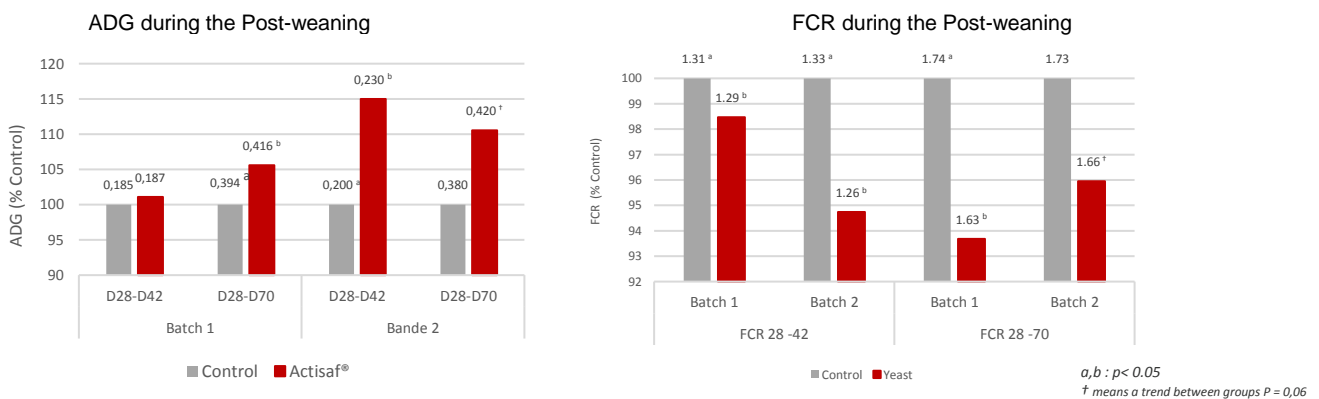
Weaning is the most critical periods for piglets. Characterized by a risk of severe anorexia, increased susceptibility to digestive disorders and microbial infections, economic losses can be considerable. Various strategies exist to ensure that piglets start well and to help them survive this critical phase. One of them is to use probiotic yeast in piglet feed. A field trial was conducted on a 500 sows farm with recurrent colibacillosis diarrhea to measure the benefits of Sc 47 yeast probiotic on zootechnical performance of weaned piglets.

Material and Methods

- In two successive batches, 284 piglets weaned at 28 days of age, weighing 7.2kg in average were separated into 2 identical groups, one receiving a control diet without yeast (Control), the other a diet supplemented with Sc47 probiotic yeast (Yeast). Weight, ADG, and FCR were measured throughout the post-weaning period. Diarrhea scores were notified. A Tukey test using the Minitab software procedure was performed. The differences were considered significant when $P < 0.05$

Main results

At 42 and 70 days of age, the performance of supplemented piglets had significantly improved on the three zootechnical criteria and in the 2 successive batches: weight (batch 1: Y: 25.6kg vs C: 24.6kg, $P = 0.06$; batch 2 : Y: 24.6kg vs C: 23.3, $P=0.06$), ADG and FCR



After 6 weeks, no significant difference in diarrhea scores was observed between the two groups, however an analysis of the piglet's weight distribution at the end of post-weaning showed that 57.8% piglets in the Yeast group weigh more than 25kg against 47.5% for the piglets in the Control group, suggesting a better homogeneity of the piglets.

Discussion and Conclusion

The first week after weaning is characterized by an atrophy of the mucosa and intestinal villi. Limit this atrophy is favorable to a better ability of the animal to digest feed and absorb nutrients. In addition, the microbiota plays an important role in restoring intestinal integrity and developing the immune system. In this trial, the farm was selected due to recurring colibacillosis diarrhea impacting its performances. To control the pathogenic pressure, the farmer usually uses a secure prestarter feed (ZnO, plasma) and the use of an antimicrobial in the drinking water is often necessary during this period. Our results observed confirm those of other studies previously conducted on the beneficial influence of the intake of probiotic yeasts on the growth performance of animals. The results can be explained in general by its modulatory effect on the microbiota but also more specifically by its effect on the inflammation induced by bacterial toxins (Zanello et al., 2011b), and on its ability to fix bacteria by "binding" effect, these bacteria being no longer able to bind to the specific receptors of enterocytes (Posadas et al, 2016).

References

- Posadas G. A., et al., 2017. Yeast Pro- and Paraprobiotics have the capability to bind pathogenic bacteria associated with Animal Disease. *Anim. Sci.* 1, 60–68.
- Zanello G., et al. 2011b. Sc decreases inflammatory responses induced by F4+ enterotoxigenic *Escherichia coli* in porcine intestinal epithelial cells. *Vet. Immunol. Immunopathol.*, 141, 133–138.