



Benefits of live yeast on sow's reproductive performance and immune transfer from sows to piglets

Objective: Evaluate the effect of Actisaf® supplementation in the diet of sows during lactation only, or during gestation and lactation, on reproductive performance and immune transfer from sows to piglets at birth via colostrum.

Trial design

Comparative experimental study
Location: Seoul (Korea)

Species/life stage

Lactating and gestating sows and their suckling piglets
Breed: Yorkshire x Landrace

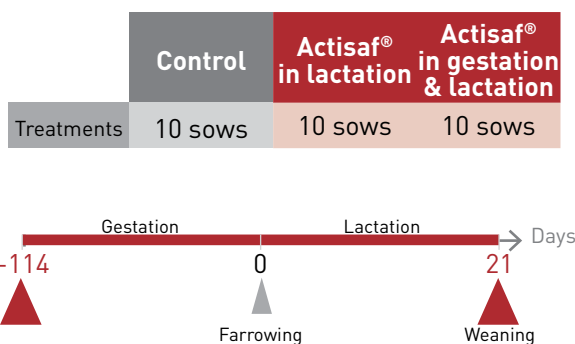
Main criteria

Weaning-to-oestrus interval, number of sows in oestrus by day 7, colostral IgG, IgG in plasma of piglets

Reference

Jang *et al.*, Livestock science; 2013; 167-173.

Protocol



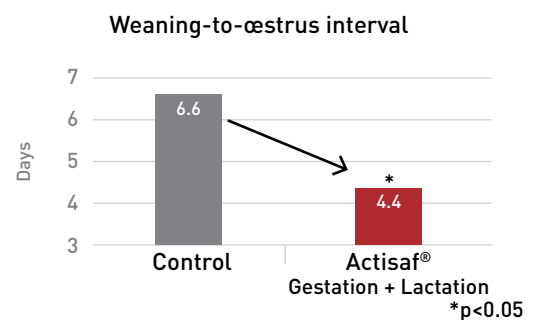
Conclusion

Actisaf® supplementation in the feed of sows during gestation and lactation reduces weaning-to-oestrus interval and increases colostral IgG, improving the passive immune transfer from sows to piglets at birth. The benefits of Actisaf® are enhanced if fed in gestation and lactation compared to just being fed during lactation.

Main results

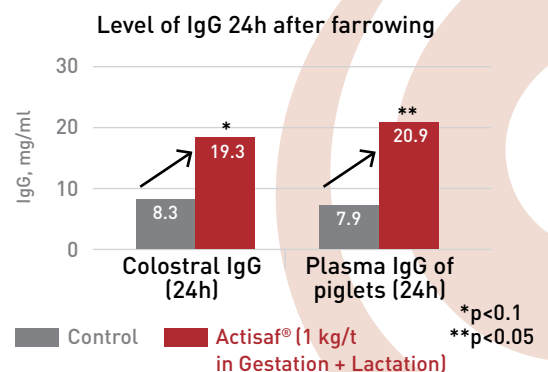
Sows' reproductive performance

- ↘ weaning-to-oestrus interval: - 2.2 days
- ↗ number of sows in oestrus by day 7 post-weaning: + 60 %



Immune transfer at birth

- ↗ colostral IgG 24h after farrowing: x 2.3
- ↗ plasma IgG of piglets 24h after birth: x 2.6
- ↗ plasma IgG of piglets at 21 days of lactation: x 2.1





Introduction

This study was conducted to assess the benefits of Actisaf® supplementation in the feed of sows during lactation, or during gestation and lactation, on their reproductive performance, the immunological properties of colostrum and the passive immune transfer to piglets at birth. Several benefits of yeast supplementation to sows and piglets have been demonstrated: an increase in immunoglobulin content of colostrum and milk, an improvement in litter weight at weaning and a reduction of neonatal diarrhoea.

Materials and methods

30 multiparous sows (average 4.5 parities – Yorkshire x Landrace) were allocated to 3 treatments depending on their parity. All sows were housed in individual gestation stalls until 110 days of gestation and were then moved to farrowing crates. Colostrum, milk and blood samples were collected on 6 sows with 10 to 12 nursery piglets and on 6 piglets (1/sow) per treatment.

The treatments were as follows:

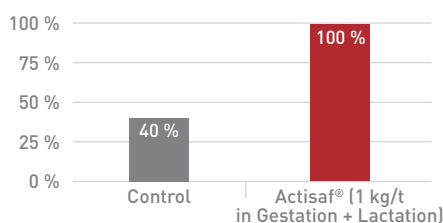
Groups	Gestation	Lactation
Control group (10 sows)	Basal diet	Basal diet
Treatment 1 (10 sows): Actisaf® in lactation	Basal diet	Actisaf® 1 kg/t
Treatment 2 (10 sows): Actisaf® in gestation + lactation	Actisaf® 1 kg/t	Actisaf® 1 kg/t

Results

Reproductive performance

- The weaning-to-oestrus interval was shortened by supplementing with Actisaf® compared to the Control group and 100% of the Actisaf(r) supplemented sows were in oestrus by day 7 post-weaning compared to the Control group (40%).

Oestrus by day 7 post weaning



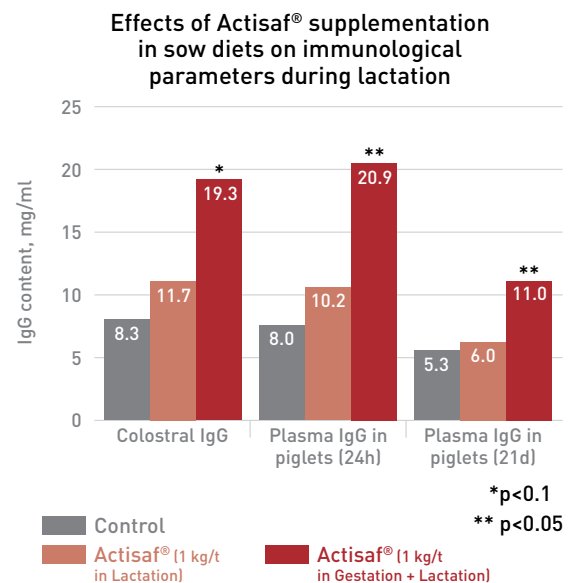
Passive immune transfer at birth

- Colostrum IgG 24h after farrowing was higher in the Actisaf® Group compared to the Control group. This effect was enhanced with Actisaf® supplementation in gestation and lactation compared to supplementation during lactation only.

Keywords Actisaf®, weaning-to-oestrus interval, colostrum IgG, plasma IgG of piglets.

Reference Y.D. Jang, K.W. Kang, L.G. Piao, T.S. Jeong, E. Auclair, S. Jonvel, R. D'Inca, Y.Y. Kim, 2013. Effects of live yeast supplementation to gestation and lactation diets on reproductive performance, immunological parameters and milk composition in sows. *Livestock Science*, Volume 152, Issues 2–3, Pages 167-173.

- Similarly, the plasma IgG levels of piglets 24h after farrowing and at 21 days of lactation were higher in the Actisaf® group compared to the Control group. This difference was enhanced for the group supplemented during the whole period (gestation and lactation) compared to supplementation during lactation only.



Conclusion

- Actisaf® added in the feed of sows improved reproductive performance (reduction of weaning-to-oestrus interval, improvement of the number of sows in oestrus by 7 days after weaning). Moreover, the immune quality of colostrum was improved allowing a better passive transfer of immunity to piglets at birth and during lactation.
- The effects of Actisaf® were enhanced when feed was supplemented with Actisaf® during both gestation and lactation compared to supplementation during lactation only.