



# Evaluation of the effect of double gleptoferron (Gleptosil®) injection on Hb levels

Eva Smidova<sup>1</sup>, Josef Vinduska<sup>2</sup>, Aurelie Lopez<sup>3</sup>, Nicolas Guerra<sup>3</sup>, Daniel Sperling<sup>3</sup>

<sup>1</sup>Privet veterinary service, Sazava, Czech Republic / <sup>2</sup>ZOD Zichlinek, Czech Republic / <sup>3</sup>Ceva Santé Animale, Libourne, France

## Introduction

Piglets are born with limited iron reserves and sow milk doesn't provide a sufficient supplementation. Constant genetic improvements in terms of prolificacy and growth rate are characteristic for modern breeding sows and piglets.<sup>1</sup> This may increase the requirements for an iron supply. A second injection of iron before weaning is becoming common in some farms. Hemoglobin (Hb) measurement is a routinely used method to establish the iron uptake and metabolism in piglets. The aim of this field study was to investigate the effect of the second application of Gleptosil (gleptoferron) on Hb levels.

## Materials and methods

A commercial farm with the total capacity of 1200 sows located in Czech Republic with the SPF status DanBred genetics was selected for the trial. All litters included in the study were originated from first parity sows. The average litter size was 14,4 live-born piglets. Piglets are weaned in standard at 26 days of age. 26 litters included in the trial were divided at random into 2 equal groups (A= 13 litters, B= 13 litters). In both groups A and B, all piglets were treated with 1ml of Gleptosil according to manufacturer's recommendation at day 3 after birth. Group B was additionally injected by the second dose of Gleptosil in the two weeks interval (day 17). Two randomly selected litters from each group were weighed at 3 days of age and at weaning in order to monitor average daily gain (ADG). All piglets received a 20 % protein creep feed as from 7 days of age.

## Results

Thirteen blood samples per group were randomly collected at weaning (one sampled piglet per each litter) and Hb level was measured by the haemoglobin-metr (HemoCue Hb 201). The mean Hb level in group A (one application) was 110,77 g/L (SD 9,8). In the group B the Hb mean level was

higher - 121,3 g/L (SD 8,0). We haven't found the statistically significant difference (Tab1.) between Gleptosil and Gleptosil 2x (p=0.0738), however the mean value was numerically higher in Gleptosil 2x group (B) and also the variability was slightly lower in this group (Tab 2.). The ADG in the group A was 218 g in comparison with the group B which was 216 g.

**Tab. 1:** Statistical evaluation of treated groups

TRT	TRT	Difference	Std Dev	Pr >  t
Gleptosil	Gleptosil 2x	-10.5385	5.763	0.0738

**Tab. 2:** Comparison of two treated groups (The Means procedure)

TRT	N	Mean	Std Dev	Mini	Maxi
Gleptosil	13	110.7	9.8	93	123
Gleptosil 2x	13	121.3	8.0	105	133

## Discussion

Additional injection of gleptoferron (Gleptosil) increased the blood Hb level by 10,53 g/L. Recent studies determined the Hb concentration below 110 g/L as an indication for the iron deficiency and the concentration below 90 g/L for anemia. Although we haven't found statistically significant difference in Hb levels, the additional iron injection might be beneficial for piglets from large litters of hyperprolific sows, when sow milk is still the only constant source of iron. Further studies and performance monitoring during the nursery and finishing period will be needed in order to evaluate a beneficial effect of the second iron injection.

## References

1. Perri *et al.*, 2015