



Uniferon Best Practice Recommendation

Iron Gap

Theoretical models and practice show that today's average piglet, on an all-milk diet, may risk developing iron deficiency anaemia as early as after 4 kg of weight gain; a condition aptly nicknamed "iron gap".

Reducing the risk of an iron gap, or even avoiding the condition by effectively closing this iron gap, may be done by taking a new approach to iron administration prior to weaning. However, how should an iron gap be addressed?

Addressing an Iron Gap

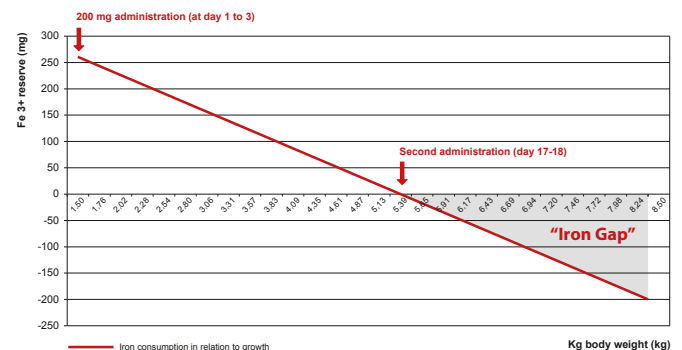
In a presentation published in AASV Proceedings 2011, Gaddy et al. discussed that traditional attempts to replenish iron stores, for example by supplemental oral iron such as ferrous sulfate solutions sprayed directly on the sow's udder, by iron-impregnated peat moss or by iron-rich soil, have all demonstrated very limited efficacy due to the immature gut of the baby pigs. Furthermore, Gaddy et al suggested that parenteral or injectable iron may be the most effective preventative or treatment product for iron deficiency anaemia in piglets. The efficacy of injectable iron to replenish iron stores is supported by data from Haugegaard et al., 2006, as a study found that a second parenteral iron administration prior to weaning increases productivity.

An effective way of replenishing iron stores, or closing an iron gap, could be obtained by the utilization of an optimized care approach, as suggested by Van Gorp et al in a poster paper presented in AASV Proceedings 2011.

Based on a mathematical model with birth weight of 1,5 kg, weaning weight at 8,5 kg and a theoretical iron need of 67 mg/kg weight gain, total estimated iron need is calculated

to be 469 mg iron. If natural source of iron is 78 mg (initial iron stores 50 mg and 1 mg in milk/day for 28 days), the additional iron requirement amounts to 391 mg to prevent an iron gap. Hence, in this particular situation, standard supplementation of 200 mg should be injected at day 1 to 3 followed by a proposed additional amount of 191 mg at day 17-18.

Hypothetical model for Iron Gap



Administration of more than 200 mg iron per piglet prior to weaning should be done under the supervision of a qualified veterinarian.

Sincerely
The Uniferon Team

