

Additional iron in feed for lactating sows

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Gunner Sørensen
Danish Pig Production

Abstract

The aim was to investigate whether administering 80 or 180 mg iron per kg feed during lactation affected the haemoglobin level in the blood in sows at weaning.

The trial comprised 208 sows that were blood-sampled at farrowing and at weaning. During lactation, half of the sows were given a regular pelleted diet to which approx. 80 mg iron was added per kg feed in the form of iron (II) sulphate monohydrate corresponding to the current recommendations. The other half of the sows were given the same diet to which a further approx. 100 mg iron was added per kg feed in the form of iron (II) fumarate, ie. this diet contained an additional approx. 180 mg iron per kg feed. The haemoglobin level of the blood samples was analysed, and analyses revealed no significant difference between the two groups in haemoglobin level at weaning. There are thus no indications that iron restricts the production of haemoglobin in sows, and it is still recommended to add 80 mg iron per FUsow to lactation diets. Current investigations are mapping other substances that may restrict the production of haemoglobin.

The sows in this trial had a haemoglobin level in the blood of 4.4-8.1 mmol/litre. In this interval, there was no correlation between haemoglobin level at farrowing, number of stillborn piglets per litter and the length of farrowing.

It may be relevant to ask whether the result of this investigation could have been different if the sows had also been given additional iron during gestation. This cannot be ruled out. Other investigations have demonstrated that a period of approx. three weeks of additional iron supply can improve an iron deficiency. However, the lactation period in this investigation was longer than three weeks, and if iron deficiency was the problem, the haemoglobin level should have been increased after that period. Several pig producers currently use 200 mg iron per kg feed during gestation. These producers also observe low haemoglobin levels and problems with firm lumpy manure among the pigs.

Based on these results, it is not recommended to add more than 80 mg iron per FUsow to lactation feed.