

Herd-specific strategies required to combat ileitis

Case study 1: Bernhard Koch

At his Sachsenhof farm at Hettenrodt in the Rhineland, Bernhard Koch had run a multiplier unit producing breeding stock for the *Bundeshybridzuchtprogramm* (BHZP; German Hybrid Pig Breeding Programme) for about 20 years; by the start of 2001, he had a herd of around 100 sows. But then, to make more efficient use of his labour, he decided to switch to rearing BHZP weaners from Hoffmann's multiplier unit.

"We decided to adopt BHZP's MEW technique," says Koch. "We completely emptied the sow unit and converted the farrowing pens to flat-decks." His facilities now have space for a total of 950 animals.

Hoffmann's multiplier unit was depopulated and restocked at the same time and now, from its new herd of about 540 sows, it sends 140 weaners to Koch's unit every four weeks. "They're newly-weaned when they reach us," says Koch. "On average, they're about three weeks old and weigh around 7 kg. At the moment, we're getting two-thirds db.CLASSIC and one-third purebred Line 03 animals." All the weaners are certified free from APP, PRRS, brucellosis and leptospirosis. The piglets are reared by Koch and the gilts selected for breeding at 180 days are sold back to Hoffmann's multiplier unit, as well as to other sources.

In the first seven months, everything ran smoothly and there were virtually no health problems. "There was hardly any mortality among the weaners and the selection rate was very good," says Koch. But in August 2002, there was a health breakdown, with severe diarrhoea occurring in the 60 - 70-kg weight range. Some animals had bloody diarrhoea and there was an increase in mortality. Acute symptoms of this nature were something completely unknown on Koch's farm. Following advice from the herd vet at the BHZP's veterinary service, faecal samples were taken and submitted for laboratory analysis. Back came the diagnosis - acute PIA.

"We find that the acute form of the disease occurs particularly in herds which otherwise have a very high health status," says Maria Lehnert, a special adviser at the *Verband für Schweineproduktion Rheinland-Pfalz-Saar e.V.* (VSR; Rhineland-Palatinate-Saar Pig Producers' Association). In order to get the disease under control, the whole herd was treated with Tylan in the acute phase. "The results were quickly visible and mortality rates fell again," says Koch.

But Koch noticed that, suddenly, younger animals were getting diarrhoea. "We've noticed for some time that, in southern Germany, PIA has been tending to affect animals at an increasingly early age," says Lehnert. As a result, Koch's herd was subjected to a clinical assessment and the findings were clear - animals were being infected in the flat-deck house rather than at the 60 - 70-kg stage. So the treatment regime on the farm was altered and animals were given two doses of Tylan, either in drinking water or mixed with liquid feed.

Then Koch heard about the possibility of vaccinating against PIA. He submitted blood samples for screening and, on the basis of the results, a vaccination scheme tailored to the precise time of *Lawsonia* infection in his herd was developed. Now he gives all his weaners the oral vaccine on the third or fourth day after their arrival. The required amount is added to the drinking water via a proportioner and the mixture is then dispensed into the circular trough in the pen where the piglets are fed.

The whole process is simple to manage and labour-efficient. "I don't think vaccination immediately after arrival is effective," says Koch. "The piglets are still stressed from travelling and we've noticed they don't drink enough at this stage."

Starting on the fourth day after vaccination, the animals are given a 14-day course of Tylan to suppress the field pathogen while protective immunity conferred by the vaccine is built up. "This way, we eliminate any risk of infection," says Koch. All the piglets arriving in Koch's herd are given formic acid in their drinking water for the first few weeks in order to stabilise their intestinal flora.

For oral vaccination against ileitis to be successful, it is extremely important to follow the correct procedure. It is essential, for instance, that pigs do not receive any antibiotics for four days before and four days after vaccination. Determining drinking water uptake is also important; on the advice of Dr. Arnold Bonitz, who has been the herd vet since 1st July this year, Koch has been checking exactly how much water his piglets actually drink over a four-hour period.

The vaccination programme has proved its worth in Koch's herd: There are no more cases of diarrhoea, the selection rate has risen from 70 to 75% and the standard deviation, one of the key parameters in gilt rearing, has improved by over 10 g, from 50.8 g to 40.4 g. In addition, the groups of pigs that Koch sells on are now more uniform in terms of bodyweight.

"Our customers are very satisfied with the gilts we're producing," says Koch. "And we're enjoying our jobs again now that the mortality problems are over." Although the vaccine might seem expensive at first sight, it is clear that the improvements in performance have already more than repaid the costs.

Captions to photos

p.114:

Vaccination against ileitis has been highly successful in Bernhard Koch's breeding herd. There are no deaths due to diarrhoea and homogeneous growth is being achieved.

p.115 (left-hand column):

Maria Lehnert, special adviser at the VSR, is always in close contact with Bernhard Koch

p.115 (right-hand column):

The ileitis vaccine is given to the piglets in a circular feed trough four days after they arrive in the flat-deck house

p.116 (left-hand column):

For the first few weeks after arrival, piglets are routinely given formic acid in their drinking water via a portioner

Trans. 03769/D.J.Parker/30.10.2006