

Vaccination against *Lawsonia* infection - a practical example

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About three-quarters of the medication used in Danish pig herds is given during the period from weaning to 30 kg, mostly to combat intestinal diseases such as post-weaning diarrhoea and *Lawsonia* infection.

The arrival of PMWS in Denmark has made the diagnosis of post-weaning intestinal and respiratory diseases more difficult. This is particularly the case for intestinal diseases, where clinical observation and necropsy alone are not sufficient for making the accurate diagnosis that is needed for choosing the optimum preventive treatment (which may be vaccination).

The key issue in dealing with *Lawsonia* infection is immunity - more precisely, ensuring that pigs develop immunity without becoming ill. This can be achieved with antibiotics (to some extent) and by using Enterisol® Ileitis, the recently-introduced ileitis vaccine.

For Enterisol to be effective, the diagnosis of *Lawsonia* infection must be confirmed by demonstrating the bacteria in faecal or tissue samples. PMWS can give rise to the same intestinal lesions as *Lawsonia* infection, so a bacteriological diagnosis is important.

In addition, blood samples are taken to determine when pigs develop immunity, so that vaccination can be timed appropriately.

In the example below, Enterisol® Ileitis was used in a non-segregated production system and the diagnosis was made by laboratory testing, although no blood samples were taken:

The herd in question was a 550-sow herd operating a two-weekly batch production system and selling 75% of its piglets at 7 kg. The remaining 25% were moved to a non-segregated two-climate weaner unit with automatic dry feeders and then transferred to an on-site fattening unit. The duration of stay in the weaner unit was about 8 weeks.

Lawsonia infection, which was treated with antibiotics, had been a problem over a long period and there had also been a small number of cases of PMWS-like symptoms. The mortality rate was 6.5%.

Hygiene measures consisted primarily of mechanical cleaning followed by washing with hydrated lime.

In September, it was decided to vaccinate piglets against *Lawsonia* infection on their arrival in the weaner unit.

After the initial four-month trial period, the results showed that average bodyweight at the end of the eight-week stay in the weaner nursery had risen from 28 kg to 35 kg and that, therefore, average daily weight gain had increased from 353 g/day to 478 g/day. In addition, the mortality rate had fallen to 2% (see table).

The number of pigs with PMWS-like symptoms - that is, the number of pigs who were chronically unthrifty - also showed a marked decrease, and there was no adverse reaction to the vaccination.

So the vaccination programme continues

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Table: Herd results

	Weight at weaning (kg)	Weight at end of 8-week stay in weaner nursery (kg)	Average daily weight gain during stay in weaner nursery (g/day)	Clinical symptoms
Before	8.2	28	353	Diarrhoea PMWS
After	8.2	35	478	No diarrhoea Fewer cases of PMWS