# Case report: improved management procedures combined with a triple piglet vaccination decreased antibiotic use in weaned piglets

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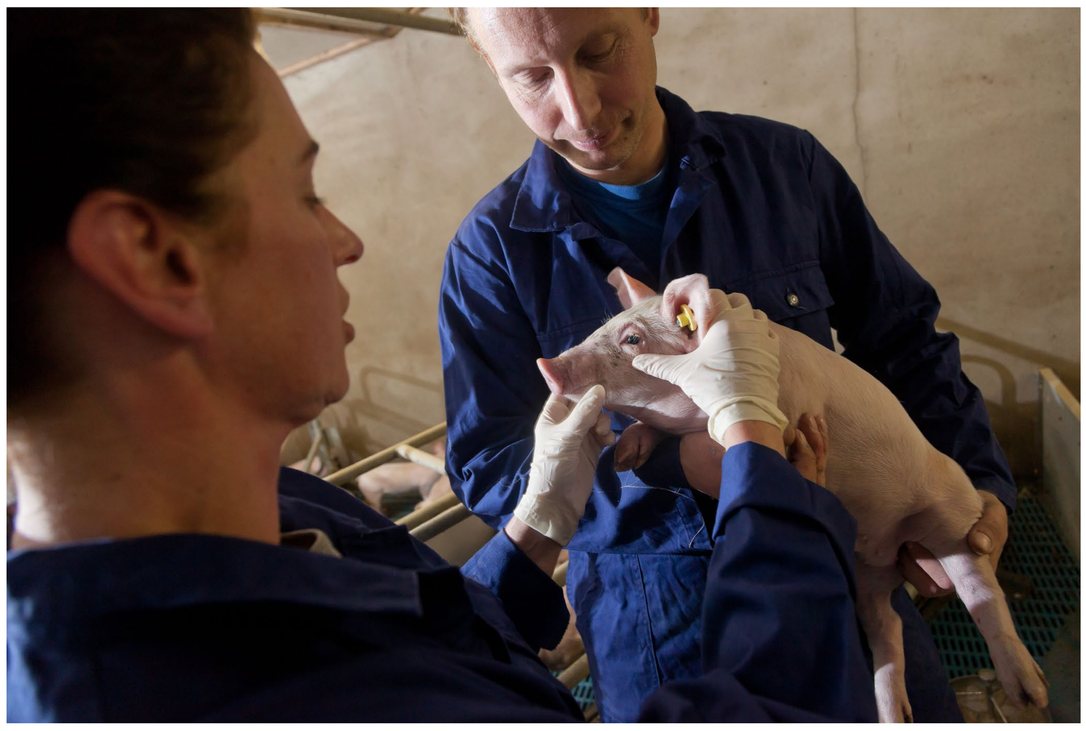
## Introduction

PRRS is an endemic virus in the Dutch pig population. PRRS infections are known to increase susceptibility for secondary bacterial infections like Streptococcus suis (Ss) (2, 3), which in many Dutch farms leads to high antibiotic use in weaners suffering from both PRRS and Ss infections. This case describes how on a multiplier site PRRS was controlled using the 5 Step Process.

## Materials and Methods

A multiplier farm - 1600 sows, conventional health status- in the Netherlands produces and sells 25 KG piglets. Until April 2016 the sows were vaccinated PRRS MLV using the post-farrow pre-breed program '6/60'. Piglets were vaccinated 3 times before weaning: PCV2 (intradermal), M. hyopneumoniae (Mhp) two shot (IM) and PRRS MLV (IM, reconstituted in the second dose of Mhp vaccine). In the first 6 months of 2016 the antibiotic use in weaning piglets was close to the Dutch attention level, primarily due to oral treatment of Ss meningitis. From April 2016, the 5 Step Process (4) was followed: 1) by setting the goal of no use of oral antibiotics in weaned piglets, 2) by describing the current PRRS status: wild type PRRS virus circulation in the weaned piglets, 3) the current constraints were listed: already a high level of external biosecurity was achieved with in house breeding gilt replacement and own means of transport, but the level of internal biosecurity was intermediate, e.g. changing of boots and clothes per production group was well organized but piglet flow at weaning was considered a risk, 4) several solutions were developed like minimizing mixing of litters at weaning, optimizing piglet feeding strategy to obtain higher weaning weights, improving post-weaning changes like feeding crumbs instead of pelleted feed and providing for partially closed floors for resting. Also vaccination protocols were changed. PRRS EU (ReproCyc) mass vaccination of the sows 4 times a year was implemented, as was a one-shot piglet vaccination (off label) with a 2 ml IM triple vaccine combination of CircoFLEX – MycoFLEX and PRRSFLEX (1) at 3 weeks of age. Finally 5) solutions were implemented and monitored. At intervals of 3 months 10 week old piglets were monitored in serum and/ or oral fluids by PRRS PCR, followed by ORF5 sequencing if possible.



## Results

*Table 1: Wild Type Virus shown in piglets due to sell. Defined Daily Doses of antibiotic use per quarter (5) in weaned piglets. DDD Attention level is above 20 (6).*

| | Before | | After | |
|---|---|---|---|---|
| Period | Q1 | Q2 | Q3 | Q4 |
| PRRS status | WTV | WTV | WTV | WTV |
| DDD 6-25 KG | 16 | 17,5 | 7,5 | 8,5 |
| Mortality 6-25 KG | 2,4% | 2,7% | 2,2% | 2,5% |

## Discussion and Conclusion

The 3 in 1 piglet vaccination resulted in a labor reduction and in less stress for the piglets. It is believed by the farm workers that this attributed to a better acclimatization process post weaning. Although the PRRS status of the farm remained unstable over the period described, the health situation of the weaned piglets improved – as indicated by the stable mortality 6-25 KG in combination with a strong reduction of antibiotic use (table 1).

Following 5 Step Process, a combined strategy of improved management and vaccination resulted in better health and subsequent less use of antibiotics in weaned piglets.

## References

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