

# **IDENTIFICATION, INVESTIGATION AND IMPLEMENTATION OF SOLUTIONS TO HEALTH PROBLEMS**

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## **SUMMARY**

Most production limiting health problems can be dealt with. However, the ease with which they are recognized, diagnosed and solved can really vary. Choosing to ignore production-limiting issues of any sort can prove to be very expensive.

Even if recognized, it is important to thoroughly investigate a health issue to come up with the right diagnosis and thereby develop strategies that will overcome the problem.

Two case studies are presented to demonstrate management of health problems on specific pig units and to emphasize the importance of the above statements.

## **CASE STUDY #1**

A 500 sow herd was established to sell 2 to 3 week old piglets into a three-site system. Farrowing started during the late summer of the first year. During the next 16 months several startup health problems and production problems were dealt with, e.g. greasy pig disease, breeding problems associated with a young herd, etc.

On particular problem, diarrhea affecting the piglets, did not want to go away. The owner, staff and myself had all recognized it as an issue and thought that routine management, i.e. vaccination, and maturity of the herd would result in the problem fading away.

When we really sat down and investigated the problem, a list of recommendations were made to deal with the problem. One of the recommendations was to take three live piglets that had just started to scour but had not been treated to the Veterinary Services Laboratory (VSL) for necropsy and testing. What I really wanted checked out was whether or not coccidiosis, rotavirus or strains of *E. coli* not covered in commercially available pre-farrowing vaccines could be involved in causing the diarrhea. While many of the recommendations were implemented and experimented, submitting piglets to the VSL was postponed for various reasons.

Finally, after struggling with the problem for about one year, submissions were made and a diagnosis of rotavirus was confirmed. Promptly, a proper pre-farrowing vaccination program was put in place and the scour problem was finally brought under control. The pre-weaning mortality dropped from 17% to 11 %. An extra 631 pigs/year were raised. The incidence of

light-weight piglets dropped from 10% to 5% and the average weaning weight improved from 4.8 to 5.4 kg.

All things considered, there was a difference of about \$35,000 the year after resolving the problem over the previous year. This is very significant considering that we thought it was a minor problem. Why did we think that? Because, at the time when we initially identified scours as the primary cause of the high pre-weaning mortality, the herd was producing 21 pigs/sow/year. This was a young herd with a fairly new barn and we were happy with most of the statistics and thought that with herd maturity, etc. everything would fall just in place.

Even though we investigated water, feed, chilling, processing of piglets, disinfection of farrowing crates, etc. and even though the recommendations to submit live piglets to the lab had been made, this one important step was overlooked or put off. This was a big mistake and a costly lesson.

## **CASE STUDY #2**

Often health problems are complex. More than one organism may be involved. Environmental stresses, nutrition and the movement of animals (management of animal populations) may allow organisms that can be controlled to “gang up” in the pigs and cause disease.

In such cases, it is important to identify all of the challenges and to implement sufficient strategies to either eliminate or reduce these challenges or to at least be able to deal with them better.

A client has been purchasing about 100 three-week-old piglets per week from one source. Initially, they are moved to all in/all out weaner rooms for six weeks. While in these rooms they are vaccinated against PRRS and mycoplasma hyopneumonia. Next they are moved into large pens in a converted farrowing/breeding/dry sow barn that is continuous flow. They stay there for 6 to 7 more weeks.

Finally, they are moved to growing-finishing rooms for another 6 or 7 weeks.

Several months ago, Post-Weaning Multi Systemic Wasting Syndrome (PWMS) started to cause severe morbidity and mortality in the weaner rooms. Laboratory submissions identified:

- field strain of PRRS,
- Circovirus Type II,
- Swine Influenza Virus (H3N2),
- Pasteurella multocida, and
- Hemophilis parasuis (Glasser’s Disease).

Recommendations to deal with this were:

- Investigate the sow herd to determine the PRRS situation.

- Vaccinate piglets with a full dose of PRRS vaccine at 3 to 5 days of age to overcome maternal antibodies, immunize and stabilize the piglets with respect to PRRS prior to arrival at the weaner barns.  
NOTE: previously they had been give 0.5 dose of PRRS vaccine about 2 days prior to weaning and moving.
- Proper washing, disinfecting, warming of the weaner rooms, etc. was discussed.
- Water treatment with penicillin to reduce the challenge of *Pasteurella multocida* and *Hemophilus parasuis*.
- Injecting piglets with ceftiofur on arrival.
- Discussed vaccinating the sow herd against Swine Influenza, but decided not to.

**What happened:**

- The strategies resolved the PWMS in the weaner rooms, but the piglets crashed in the starter room because of Porcine Respiratory Disease Complex. Lab submissions revealed:
  - Very low Swine Influenza titres (H3N2), possibly maternal antibodies, and
  - PRRS

**Follow-up recommendations:**

1. Booster vaccinate the piglets with PRRS again, about 4 weeks after arrival in the weaner rooms. We theorize that early vaccination has helped reduce illness in the weaner rooms but wears off too fast. By re-vaccinating at this time, two weeks before the pigs go into the starter rooms, they will have much better protection.
2. Renovate the starter room into all in/all out units.

Time will tell whether we are on the right track or not.