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# The use of Pulmotil, herd closure, and serum inoculation in a 1500 sow iso-wean facility to eradicate PRRS, Mycoplasma hyopneumonia, and Pasturella Multocida Type A.

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## Introduction and Objectives

In late winter of 2005 serology testing of this farm revealed that seroconversion for both PRRS and Mycoplasma hyopneumonia had occurred. Producers / Owners of this farm had been graced with 6 years of negative production before seroconversion occurred. It was quickly evident that the costs of a PRRS / Mycoplasma / Pasturella positive herd and finishers would be too costly to maintain.

Owners were skeptical of being able to maintain a negative herd, since they had converted. This skepticism and the cost of a depop-repop prevented them from choosing this method. The owners wanted to try a less expensive method that was just as quick and easy to implement.

## Materials and Methods

**PRRS Eradication** - The herd was closed in January of 2006. Whole herd serum inoculation occurred in March of 2006. Serum was collected from 18 day old piglets and stored in liquid nitrogen. Samples were also submitted to ISU – VDL for sequencing and it was the same strain as the initial break, 1-?-4. The inoculum dosage was 2 mls, with 373 virus particles per dose. At this time McRebel protocols were used in the farrowing house, and no pigs were allowed to remain on farm after weaning.

**Mycoplasma Eradication** – Five pounds of feed containing 363 grams/ton of Pulmotil was fed daily for 21 days to all sows in June of 2006. One week prior to Pulmotil feeding all piglets 6 days of age or younger received an injection of Draxxin. From this time forward every piglet received a dose of Draxxin at birth and 10 days of age. Wean age was lowered to an average of 14 days during the 21 days of Pulmotil feeding.

Sixteen sentinel feeder pigs were placed into the sow herd in August of 2006, after confirmation of PRRS PCR negative weaners. Sentinels were tested at 30, 60, 90, and 130 days post placement with PRRS and M. Hyo ELISA. These animals

were allowed to roam gestation freely for the first 60 days. New gilts were introduced to the herd in late October 2006. These gilts remained in their own flow until July 2007 at which time parity two sows were turned into the regular flow.

## Results and Discussion

All sentinel testing for PRRS and M. Hyo was negative as shown in Table 1. On day 130 post placement PRRS PCR on serum, in pools of 3, sentinels was negative. Lung tissue from 2 animals tested negative for PRRS and M. hyo by PCR and no bacterial growth was present.

Table 1. Average Sentinel Serological Titers

	Day 0	Day 30	Day 60	Day 90	Day 130
PRRS	0.013	0.009	0.018	0.012	.032
M. Hyo	0.001	0.016	0.050	0.005	.005

New gilts introduced after closure have remained negative to date. Production on the sow farm has returned to above pre-infection levels, most noted in an additional 1.49 pigs weaned per mated female per year and a 1.33 day reduction in wean to 1<sup>st</sup> service interval.

The cost of this program was \$66.00 per sow, and attained the same objectives as a total depop/repop. Costs would have been lower per sow, had more gilts been in place at the time of closure to prevent low sow numbers and lack of wean pigs over time.

As more herds use herd closure as a method to eradicate PRRS consideration should be given to the use of medication to eliminate other pathogens from the farm concurrently.