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PRRS: Production bane or boom?

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Premium Standard Farms

The PRRS virus has long been a vexing problem to conventional US pork production. The Premium Standard Farms system was affected in both major production pods. The East side farms (original PSF) had 88K sows and on-site nurseries with offsite finishing; all production services are in-house – 2 feed mills; truckwash at Princeton (sow/nursery) and Milan (GF). The West side (Coffey) operations (old CGC ops) had 25K sows with on-site nurseries and offsite finishers. This system had all its own internal services like feed milling and truckwash capacity.

Since 1995 when PRRS was initially introduced to the PSF system, various methods have been undertaken to deal with this virus. Traditionally, the strain(s) that we had seen on the East operations was relatively mild (2-5-5) in sow units but problematic in nursery and finish. Coffey operations had a much more aggressive (1-4-2) variant that caused problems throughout the entire production chain. The only site not affected was our Boar stud and remains so to date.

As the years progressed, it became painfully apparent that the option of "dealing with PRRS" was becoming less and less attractive. Cost of production suffered as throughput steadily declined. It cost more in labor, medications, etc., to raise the same amount of hogs each and every year. Morale of the work force was on the decline as bonus potential quickly became the exception rather than the norm. That issue combined with the fact that it took more hours and hard work to accomplish the same lukewarm end result. Something HAD to give!

At the end of calendar year 2001, a group of key managers, production staff and corporate personnel got together and decided that it was time to not accept the norm and do something different. PRRS had to be eliminated in order to achieve the production stats that were budgeted. Several systematic issues were noted with current herd flow and design that did not lend to "dealing with PRRS" and true disease control:

- one large gilt developer for 88K sows (east side)
- no working isolation facilities (east or west)
- internal multiplication that was PRRS positive
- no definitive place to get large numbers of PRRS negative animals

At the same time, the commitment was made to change genetic sources. This decision was pivotal to jump starting the PRRS negative project. The new supplier could guarantee enough negative animals to satisfy the flow requirements. Our end goals had to be simple:

- remove PRRS from the entire PSF system – one step at a time
- separate out flows so no one pod would be effected by a health challenge
- implement a comprehensive biosecurity and disease prevention program. To achieve these goals would be a huge effort, but essential for the continuation of production levels that were required.

Our production team focused on the Coffey operations as they had several factors in their favor that lead to the decision to depopulate:

- more aggressive PRRS variant than east side production (potential risk to Princeton?)
- unit separation allowed for easier coupling of farms (location)
- closed system – all production services in-house
- current production was suboptimal

Plan to depopulate Coffey:

- Offsite isolation and crated Breeding Projects to house negative gilts during depop of units
- Breakdown units (2500's) into these groups: 2 – 3 – 3 (could not depop all 8 at one time)
- Shift sows from units depopulating to other farms or offsite holding in order to maximize farrowing (have less pigs gone from the system to avoid plant holes!)
- Provide downtime within unit to allow adequate kill time for PRRS (2 weeks)
- Implement comprehensive biosecurity plan for each farm
- Finish with finishers

This project kicked off in November of 2002 and was finalized, in sow by February 2004. For the purposes of this paper, I have greatly simplified all the events and hard work/coordination that had to happen between ALL PSF operating groups to pull this off!! Once the depopulation was complete, the Coffey system had its own operating isolation and Breeding project that separated it completely from the East side operations.

Table 1 shows the production stats comparing Coffey when it was a completely PRRS positive production (2002) to when it was completely PRRS negative production (2004).

The decision to depopulate the Coffey farms was the right decision for our system. As we continued to move forward and evaluate each pod, the decision to depopulate or to do another method of PRRS elimination was considered. To date, we are about 51% PRRS negative in the sow system and about 30% in Grow finish operations. We continue to follow our goals and have created a comprehensive biosecurity plan; have about 75% of sow production on a dedicated iso and Breeding Project system and are still continuing to strive to be a PRRS negative system - one step at a time.

The end goal for the production flow will be as listed in **Table 2**.

PRRS has definitely been a challenge to us, but in hind site, without such a challenging disease would we have taken the additional and aggressive steps to make wholesale improvements in our herd health and production system? The changes we have made have added definitive value to our company through improved performance on-farm and at the plant. These changes have made the shift from "dealing with PRRS" to "eliminating PRRS" a mantra we will embrace for many years to come.

Table 1: Coffey production PRRS negative vs. positive

	2004	2002	Variance
Preg Check	91.50%	84.50%	7.00%
Farrow Rate	85.60%	78.20%	7.40%
Sow Death Loss	9.10%	15.60%	-6.50%
Total Born	11.75	11.34	0.41
Born Live	10.86	10.29	0.57
Stillborn	0.66	0.72	-0.06
Mummies	0.23	0.33	-0.09
Fwg Livability	88.20%	86.70%	1.50%
Nur Livability	98.20%	95.70%	2.60%
% Marketed	95.3	92.2	3.10%
% Death Loss	4.6	6.6	2.00%
% Culls	0.1	1.2	1.10%
ADC	1.85	1.69	0.16
FC	2.59	2.62	-0.03

Table 2: End goal for production flow

	West Side (20,800 sows)	East Side 1 (27,000 sows)	East Side 2 (28,125 sows)	East Side 3 (36,680 sows)
1	isolation	isolation	isolation	Isolation
2	Breeding Project	Breeding Project	Breeding Project	Breeding Project
3	Nurseries	Nurseries	Nurseries	Nurseries
4	finishers	finishers	finishers	finishers