

Sponsors

University of Minnesota

College of Veterinary Medicine

College of Food, Agricultural and Natural Resource Sciences

Extension Service

Swine Center

The 2009 Allen D. Leman conference proceedings book is made possible by the generous support of **IDEXX**.

We also thank the following sponsors:

AgStar Financial Services

Alpharma Inc.

American Association of Swine Veterinarians

Applied Biosystems

Bayer Animal Health

Boehringer-Ingelheim Vetmedica, Inc.

Elanco Animal Health

Fort Dodge Animal Health

IDEXX

Invervet/Schering-Plough Animal Health

National Pork Board

Newsham Choice Genetics

Novartis Animal Health US, Inc.

Pfizer Animal Health

PIC

PigCHAMP

PRRS CAP2

Formatting

Tina Smith

CD-ROM

David Brown

Logo Design

Ruth Cronje, and Jan Swanson;
based on the original design by Dr. Robert Dunlop

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, or sexual orientation.

Single-source versus multi-source pig flows

Dave Wade; Tara Donovan; DVM, Jim Moody, BS; Rose Rott, BS

The HANOR Family of Companies

We might be coming late to the party but it certainly appears that the industry might be rethinking its position regarding the production practice of sourcing pigs from multiple sow farms into one nursery or one wean to finish (W2F) facility. I know we have.

Sale barns were at one time a very popular place for producers to buy feeder pigs. These sale barns were a place where many sources of pigs would get thrown together, possibly sorted and resorted, sold and/or resold, as the case may be, to farmers looking for a few pigs to finish. As people started becoming aware of the need for single sourcing because of health issues associated with “Sale Barn” pigs, feeder pig cooperatives became very popular in the late 1970’s and early 1980’s. These were systems that produced feeder pigs for producers that didn’t want the hassle of a sow farm, but usually came from a single sow herd. Some of these cooperatives are still in play today but usually supply weaned pigs to their members.

In the mid to late 1980’s a production practice known as 3 site production was being introduced. This system located the sow farm on one site, the nursery on one site, and the finisher on another. These sites were separated by some distance to reduce the aerosol, as well as lateral transmission of disease. The nursery site was at the top of the health pyramid, finisher second and the sow farm was on the bottom. This was predicated on the research work of Dr. Tom Alexander, Dr. Hank Harris and many others.

I was actually involved, in the field, with a project to clean up pseudorabies virus (PRV) from the growing pigs, while the sow herd remained positive. It involved weaning the pigs at an early age to an off-site nursery, testing the piglets negative and then moving the negative group of pigs to a finishing site. This project was successful at eliminating the virus from the piglets and they tested negative at the finishing site and were sold for breeding stock. There were also many other projects at the time cleaning up farms with diseases such as transmissible gastro enteritis (TGE), Atrophic Rhinitis (AR), etc. I mention this as a background to the fact that we believed many of the economically significant pathogens at the time could be eliminated by weaning pigs at early age and off-site.

As the industry continued to grow by leaps and bounds during the 1980’s and 1990’s, farms tried to capitalize on economies of scale and became much larger. There was a lot of work being done on All In / All Out (AIAO) technology making sure producers were totally depopulating rooms of growing animals and cleaning/disinfecting between groups. As the industry continued to look at this strategy, it was determined that if AIAO rooms are good, then AIAO sites would be better, therefore leading us down a path of mixing pigs from different sow farm sources in order to fill sites in a week or less.

As many of you know multi-sourced grow-out facilities present their own unique sets of challenges, but were put in place to take advantage of transport logistics, facilities filled in short periods of time, usually less than 1 week, nutrition management, specialized production management, etc.

The sow farms associated with the multi-sourced pig flow have to be extremely compatible from the health side. Not only should they have been compatible from the standpoint of the “major” diseases such as PRRS, APP, AR, Mycoplasma, etc. but the sow farms also need to be compatible at the micro-flora level. This would constitute bringing all the farms to a common health status by having a single source of gilts, feedback, acclimatization and vaccination programs.

Another complication with the large finishing farms was that if you wanted to minimize piglet sources it required larger sow farms. These larger sow farms pose their own issues with sub-populations of health within the sow farm. Also, in our case, we actually modified some smaller farrow to finish facilities to properly size the sow farm in order to single source finishing flows. This led to a scattering of the gestation and lactation spaces to completely different areas on the farm as they were remodeled. To properly size the sow farms, finisher barns were converted to gestation and/or lactation, and nurseries were converted to farrowing or in some cases gestation.

The single sourcing of finishing farms also required us to rethink how we manage moving the pigs from the sow farm to the nursery or W2F facilities. In most cases we made some renovations and established staging nurser-

Single-source versus Multi-source pig flows

ies on the sow sites. These staging nurseries really accomplished two purposes. We could load trailers full of weaned pigs reducing our transport cost. Secondly, if there was inclement weather and trucks were in jeopardy of not reaching their destination, we could hold the pigs a few extra days waiting for the weather to improve. The down side of staging nurseries is the potential for abuse by holding onto weaned pigs trying to improve their health or make the minimal individual piglet weight the W2F facility requires. Holding the weaned pigs on the site for another week or two contradicts the point of moving weaned pigs off-site to protect the health of the piglets and possibly jeopardizing the health of the sow herd by leaving these little incubators of disease behind.

As an example we have a system that has two sow farms sourcing a 120,000 head owned nursery and finisher complex, with some excess pigs being finished externally in contract facilities. For over 10 years both sow farms commingled weaned pigs into a 10,000 head nursery site over a 2 week time frame. One of the sow farms had chronic PRRS issues with multiple new strain introductions over the past few years. This same sow farm has had two herd closures over the last 3 years trying to clean up PRRS. The other sow farm source also broke with an unrelated strain of PRRS in November of 2007. Although we have

had several years of good production, the inability to homogenize the health status of the two sow farm sources begged for us to separate the pig flows and run them independently.

Our system uses a key production indicator called “Top Hog Index” (THI) to monitor the over all performance of our growing herd. The THI measures nursery/finisher death loss and cull pigs at the farm, DOA’s/DIP’s, subject hogs, slows and light hogs at the plant. As can be seen in the graph Figure 1 the nursery/finishing operation was severely affected by the PRRS break previously mentioned. We split the flows from the sow farms because each sow farm had a different strain of PRRS active at the time. We felt that it would be best to try and manage the pig flows separately instead of having pigs from one farm infecting the other and vice versa.

Although there are challenges with single-sourced pig flows, the health challenges encountered in a multi-source flow led us to adapt our system to single-source pig flows resulting in performance advantages when compared to previous multi-sourced flows.

Figure 1: The Hanor Family of Companies Top Hog Indexes

