

---

## Sponsors

---

### University of Minnesota

College of Veterinary Medicine

College of Agricultural, Food and Environmental Sciences

Extension Service

Swine Center

### Editors

W. Christopher Scruton

Stephen Claas

### Layout

David Brown

### Cover 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.

# Sow attrition: The next steps

S.C. Henry, DVM, Dipl. ABVP Swine Medicine

After months of study, review of records, and necropsy effort, I conclude: “Clearly, there is a problem.”

The on-farm mortality in breeding herds varies markedly across our industry. In addition, the early attrition and rapid turnover rate in many operations is both biologically and economically alarming. The details and descriptions provided at this conference describe processes that form the foundation for problem definition and long-term resolution. The work is still preliminary but it is excellent work. When faced with complex problems of this sort it is always tempting to leap to early conclusions. That, I believe, is the most dangerous step at this point. However, these investigations and this systematic approach help to define and clarify questions I have considered. The challenge to swine medicine is clear: prompt solutions and resolutions. I pose the following questions that come to me from results to date:

Infectious disease—that branch of medicine with which our profession is most comfortable—appears to have a very limited role in this entire pathogenesis. Before this appearance can be accepted as fact and dismissed from the causality lists, should there not be a formal, expert review of findings?

Other agents unknown to us—infectious organism interactions and lesions so subtle as to be heretofore undetected—may justify resources and further investigations. How can this best be pursued?

Metabolic disease and the pathology of aberrant metabolism are well-defined in many species on an individual animal basis. In the larger perspectives of herds, populations, and systems, however, metabolic failure as the underpinning of pathology is a gap in our scientific understanding. While the industry is keenly aware of the advances in productive output on a per female basis, it is not nearly as clear in its understanding of the inputs necessary to achieve those results. Are we witnessing the previously unappreciated costs of realizing genetic productive powers that have been built into contemporary breeding systems? While the basic knowledge on environmental demands, nutrient quality and quantity, as well

as maturational requirements, are well known, we lack a system to assure accomplishment of these requirements in real-time. Shouldn't resources be allocated to compile these requirements in a systematized approach that allows real-time monitoring of accomplishment? Can a standard of “breakthrough management” be developed and employed in a pro-active, preventative form rather than a reaction to unforeseen problems?

It appears to me that there is a sharp dichotomy between the stated desire for robustness and vigor in our breeding populations, on one hand, and the absolute economic need for maximal prolificacy and fecundity on the other. While the wish that both bars be raised simultaneously is laudable, it is not one likely to be granted unless metabolic requirements can be appreciated at the farm level. If such selection were possible, should we expect multi-trait selection linking robustness in the present generation with the ability for fertility and fecundity? Such appears to be the production industry goal—yes, even its demand. A blending of theoretical genetic possibility with practical production capability requires understanding and knowledge on the part of all parties. The practitioner is the intercessor for the sow as well as the educator for the farm. This role should be accepted without question.

In conclusion, breeding herd mortality and attrition to me represent the complexity and challenge in sustaining population health. The solution lies in evolving a systematic, higher form of medicine. Relational, real-time assessment of environment, productivity, nutrient provision and retention, output, and pathogens will be the clinical “kitchen”. The management of these data as simultaneous, measured adjustments and corrections, is, I believe, the veterinary medicine's future in the next century. Robustness, coupled with fertility and fecundity, comes only with discipline and inputs our industry has not mastered. The Sow Attrition Team has offered direction. It will take coordination within the industry to make the next progressive steps.

