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Editors

W. Christopher Scruton

Stephen Claas

Layout

David Brown

Logo Design

Ruth Cronje, and Jan Swanson;

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Cover Design

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Reproductive management in hot weather: What must we do?

Joaquín Becerril, DVM, MS
La Piedad, Michoacán, Mexico

Introduction

During the past few years, pig producers of North America have been forced to change some of their traditional production strategies in order to achieve successful reproductive performances. Until recently, some of today's most common practices in the breeding barns (e.g., AI in its various approaches, real time pregnancy diagnosis, computerized recording and data analysis programs, etc.), were not routinely performed. In some instances, very good results were needed to convince the producer to adopt and apply these technologies regularly on the farm.

All the new developments in reproductive physiology, feeding programs, animal health strategies, and data analysis are very important. However, we have also learned that appropriate reproductive management of the modern sow also requires the producer to implement a sound management system which depends on a highly effective staff. Today's working force must be well trained and willing to accept new ideas that might be very different from yesterday's recommended practices.

Personnel issues

In order to get good results, we may have to establish a very simple breeding regimen: just give the sows all they need, so they will produce what you expect from them. Sometimes they will wean more than 25 pigs per year! But to get these figures we must first understand what it means to "give the sows all they need." Second, in order to accomplish the best results, we have to realize that every farm is unique and has its own problems. Of all the vital components related to achieving high efficiency on reproductive performance, the quality of the workers is definitely the greatest challenge. Therefore, the reproductive management of the breeding sow is not as easy a task as some people may think—not even in countries with cold climates and high-quality labor. So what might we expect from breeding herds raised in hot weather conditions or places where the behavior and performance of the personnel are not always what we can expect from them?

Here is a quote that allows us to understand the gap between theory and practice at the farm level regarding the

importance of personnel: "Experts from all over the world, who have grappled with the requirements of the sow (in terms of its nutrition, facilities design and health assurance), are the servants, a good stockperson is the master"(4). Therefore, besides providing personnel with the best new ideas, we must realize that we must also provide them with the necessary motivation and time so they have the incentives and opportunities to exercise their skills.

What must we do to develop a successful reproductive program for a breeding herd in hot weather?

First, we may have to understand that the best performance (effectiveness) from a reproductive program will be obtained after a long-term period of interdependent work, and, therefore, we must think (and work!) on a win-win basis. A win-win agreement will allow us to establish the foundations necessary for long-term effectiveness.

We have to make explicit to the personnel the following five elements in order to get the best results from our reproductive programs:

- Identify the desired results (realistic goals)
- Specify the guidelines (parameters, principles, etc.)
- Identify the resources (human, financial, technical, organizational)
- Establish the accountability (specify the performance and evaluation processes)
- Establish consequences (what could be expected for either good or bad results, and how to proceed)

The goal of such a win-win agreement will be to seek and get mutual beneficial results. Sometimes the stockperson does not know what we expect from him; therefore, he is never going to realize the importance of his efforts as part of a working team. This situation, unfortunately, is common on many farms where managers do not have or do not want to establish an effective, long-term win-win strategy built upon creative cooperation and teamwork. Once we have established a system based on teamwork, we can expect far better results than either party could achieve alone.

Areas of assessment

Personnel issues are not the only factors influencing reproductive results in hot weather climates. The following outline describes the main issues managers should consider when solving problems with sub-optimal reproduction.

Reproductive management

- Inadequate breeding targets (e.g., services per week, availability of replacement gilts, and, therefore, farrowings per week)
- Replacement gilt and breeding sow management (e.g., genotype, body composition, health status, age at first breeding, non-productive days, cost per gilt entered, heat checking, AI technique, quality, timing, etc.)
- Real breeding stock inventories
- Parity distribution and age at removal
- Record keeping, interpretation, and data use in troubleshooting problems (e.g., low farrowing rates, gilts and sows not bred, repeat services, pigs born alive, etc.)

Labor

- Income status of the personnel (low income = poor results?)
- Personnel background (inexperienced and under-trained workers = sub-optimal results?)
- Leadership experience (inexperienced managers = unmotivated personnel and high turnover?)
- Lack of S.O.P (no manuals = non-standard processes?)

Facilities and environment

- Housing system (e.g., crates vs. pens, building size, ventilation, insulation)
- Seasonal variation
- Adequate maintenance plans and current status of the buildings, crates, drinkers, feed bins, etc.
- Water availability and quality

Feeding and nutrition

- Understanding every genotype's requirements
- Replacement, gestation, and lactating feeding programs and costs
- Gestational and lactational feed intakes
- Water availability
- Micotoxins (control and prevention strategies)

Current health status

- Present diseases and control/eradication programs
- Monitoring the effects of diseases on reproductive performance
- Economic impact of diseases in the reproductive performance

Armed with an understanding of these problem areas and knowing the status of the farm, we can work systematically to address sub-optimal reproductive programs. Most of the problems that we now face in hot weather conditions are related to labor and health issues. Before the PRRS outbreaks in the 1990s, our main concerns were with poor genetic performance and low labor quality. Even though we started working with AI the late 1980s, fertility results were not a big issue on many of the big commercial farms, but once PRRS-related poor results appeared (i.e., abortions, depressed farrowing rates, and small litter sizes for long periods of time), such problems have often caused a long-lasting state of frustration for farm personnel. For the last few years, we have been working on this matter (disease and management) in order to control its deleterious effects on the breeding herd as well as on the state of mind of the pork producer, veterinarians, and farm personnel.

Conclusion

It is obvious from the foregoing discussion that there are many factors that adversely affect our farms' reproductive performance in hot weather situations. All of these factors must be recognized, and appropriate management steps must be taken in order to ensure optimal results for the survival of our breeding units.

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