

## Summer Strategies in Swine Finishing Barns

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I recently listened in on a conference call sponsored by Elanco and wanted to relay some of the speakers' thoughts and ideas for managing summer heat problems in swine finishing barns. Much of this information is from Dr. Mike Brumm and some of it comes from 20+ years dealing with problems that occur in the summer. Along with this paper I have enclosed copies of charts from the meeting that I hope you find informative.

The effect of heat stress on swine in the summer is well documented. In handouts 2a and 2b, once we get past 77 degrees in our barns daily feed intake declines with a corresponding decline in average daily gain and a worsening in feed conversion. The modern high lean pig actually produces more heat than his counterparts did 20 years ago. Genetic improvements have increased feed consumption and gain and the by product is more heat being dissipated by the modern hog. Charts 3a and 3b by Dr. Brumm do an excellent job of explaining this process. Unlike we humans, the pig does not sweat and his main method of ridding heat is by evaporation (latent heat) to his cooler surroundings of air and concrete. If you observe pigs in heat stress they lie out and attempt to put as much of their body in contact with the floor. Evaporation is a key element to managing heat stress in pigs.

### **Ventilation**

Barn controllers should be reset for pigs finished in the summer. Set points should be down to at least 62 degrees by the time the group weighs 100 pounds. Tighten the stage differentials so the barn can react more quickly to rising outside temperatures. Use large bore sprinklers when temperatures exceed 80 degrees. Do not use misters, they will only raise the humidity in the barn and will not provide good pig evaporation. Curtain sided barns should have the sprinklers coming on at 18 degrees above set point. Tunnel barns can be set at 20 degrees over set point (82 degrees). Attempt to get at least 60% of the pen covered by the sprinklers. Watch sprinkler placement near feeders on curtain barns as high winds can cause problems with water being blown into feeders. Set the sprinklers to be on for 2 minutes. The off time should be between 15 and 20 minutes. It is the actual drying of the pigs that allows for the evaporative cooling effect. The exact time off can be determined by observing the time required for the slats to dry. This may vary with outside humidity; higher humidity will take longer to dry. However as outside temperatures increase normally humidity declines and allows for better evaporative cooling.

## **Nutrition**

Review diets for possible summer changes. Added fat has a higher value in the summer than in thermo neutral weather. Lysine levels may need to be adjusted with increasing fat levels to maintain a correct lysine to energy balance. Evaluate fiber it can increase heat production by the pig. Review your feed budgets; sometimes a simple change in the budgeting of diets is easier than a wholesale change in the diets themselves. Evaluate your Paylean strategy. Like fat it has more value in hot weather. Manage the feed systems on the farms. Feed outs are more common in pigs fed in the summer as bridging of bins and feeders are more common. Manage your feeders and ensure at least 50 percent pan coverage is available in each feeder. Restrictions in intake are more costly in the summer. Do a good walkthrough late in the day to make sure all pigs have access to feed. Pigs will eat much of their feed at night in hot weather so having feed available at night is critical.

## **Management**

Do not overcrowd pigs finished in the summer. Make sure they have at least 7 square ft. per pig in the summer. Consider moving your 1<sup>st</sup> sale in the barn up one week in the summer. The maximum heat production in a barn will be the day prior to the first sale. Relieving the barn will allow more space and reduce the heat stress on the remaining animals. Load market trucks early if possible. Take more time and move fewer pigs per trip from the pens. Consider your stocking densities on the trucks. Many people reduce loads by 10 pigs per load in the summer. Review your pig flow strategies-adding an extra barn in the summer allows many systems to maintain their average market weights in the summer.