

Should We Be Monitoring Water Intake In Our barns?

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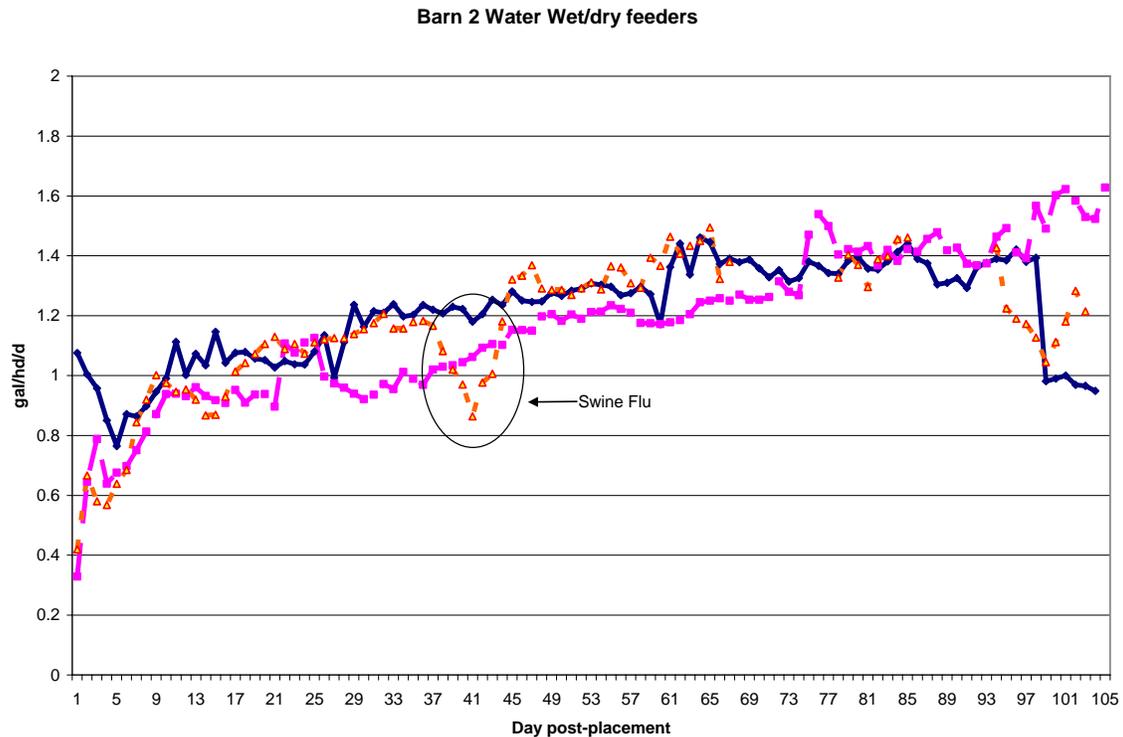
Water is commonly labeled the “forgotten nutrient” since we often take its quality and availability to our animals for granted. However, it is the nutrient required in the largest quantity by swine, although many production systems may limit access by neglecting recommendations for number of drinking spaces, drinker types and adjustments, and quantity of water delivered into barns. Dr. Mike Brumm, Extension Swine Specialist with the University of Nebraska, has spent a considerable amount of time researching water needs and water intake patterns, and has also come to the conclusion that monitoring water usage in individual groups of pigs, on a daily basis, can provide key information on predicting pig performance and that will allow for making timely management decisions.

Producers have often attempted to estimate feed usage as a predictor of performance, and thereby serve as an indirect indicator for when animals are stressed or are otherwise not performing at an optimal level. Monitoring feed auger run times and use of feed budgets can serve this purpose. Stressors may include onset of disease, excessive temperature fluctuations, heat load, or stress from rough handling or commingling of pigs. However, feed usage can also be affected by parameters outside of the pig’s control, such as out of feed events. These situations occur more often than producers would like to admit, and may be caused by feed bridging in bins, equipment malfunction, or human errors in scheduling feed delivery.

Water intake, however, is under greater control by the pig. If water delivery equipment is maintained properly, water will always be available to the pig. Availability of water recording devices, whether manual or electronic, allow producers to better monitor water usage by room or barn. Research by Dr. Brumm and others would indicate a strong relationship between drinking water usage and animal health. Based on field observations, if water usage drops more than 30% in a day, or drops for three consecutive days, a potential health challenge may be occurring. Monitoring these daily trends can allow a producer to detect disease onset or health challenges in a group of pigs 24 – 48 hours before clinical symptoms occur. Providing preventative therapy at the earliest possible time can mean the difference between a relatively insignificant performance blip and an all-out disease outbreak.

As mentioned previously, several companies offer electronic water monitoring systems that provide real time data and offer the greatest sensitivity. However, a less expensive alternative that is easy to implement involves using a “Water Usage Chart” to map out water usage on a daily basis. Developed in cooperation with the University of Nebraska and the Iowa Pork Industry Center, the spreadsheet can be downloaded free of charge. The producer or employee reads the water meter once a day, at the same time each day, records the information and updates the graph on the form. The graph provides a visual depiction of water disappearance, and allows the caretaker to more easily identify changes in water intake, and thereby pig performance.

Monitoring water usage on individual groups of pigs on a daily basis offers an inexpensive, yet valuable management tool to better observe and care for pigs. Charting of water disappearance allows for quicker detection that something is negatively affecting pig performance, although it does not directly indicate what the problem is. Research and field observations would indicate that monitoring water usage is much more predictable and sensitive than monitoring feed disappearance, and takes minimal time to implement and maintain.



Supplementary Resources:

To download water usage chart:

<http://www.extension.iastate.edu/ipic/information/WaterchartV100.xls>

“Water as a Predictor of Tomorrow’s Pig Performance”

<http://porkcentral.unl.edu/water%20predict.pdf>