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# An in-depth analysis of the effects of facility types on production parameters within a large production system

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New Fashion Pork

**A**s our production company has grown, we have seen an evolution in the style of facilities that we have constructed to raise our growing pigs. At the onset, we utilized three-site production with large, “hotel-style” nurseries and natural, curtain ventilated finishing buildings. Over the years, we have adopted wean-finish technology and have created two-site and modified two-site production schemes. We have evolved from naturally ventilated curtain buildings to single and double wide tunnel ventilated finishing buildings. Over the past two years, we have put up Quad barn and Tri-Barn finishing facilities as well. We have experimented with varying pen sizes, autosort technology, water and feeder types as well. We have the different styles of barns across multiple pig flows and locations. We wanted to be able to look at what we’ve done and see if there were significant differences between different facility types in how they affected performance during the growing period. This would influence how we decide to construct growing pig facilities during the future.

Due to the nature of our growth over the years, we have a diverse system of many different facility types, but also sow farms with varying genetics and health status as well. Therefore, we knew it would take a large sample size to find the expected small differences between facility types. We took all of our growing herd group data for the past six years in order to hopefully find the differences between facility types. We analyzed group close-out information looking at differences in average daily gains, feed conver-

sions, and average daily feed intake primarily. We had to control for average entry weights, season of the year and the source of the pigs as well as there are differences in health status and genetics that undoubtedly have a large effect on growing pig performance. We also focused on groups that were relatively healthy as poor health groups would have a larger impact on growing pig performance than the types of facilities that they were raised in.

The facility information that we looked at were the differences between ventilation types. We compared naturally ventilated curtain buildings to power ventilated finishing buildings. We also were interested in the general type of feed delivery system. We wanted to compare dry feeders to wet/dry feeders to see if there were differences in feed intake between the two. We also looked at the style of water delivery comparing nipple, cup and swinging waterers as well. We also wanted to look at the number of water sources relative to the number of pigs per pen to see if increased water availability and thus consumption impacted growing pig performance.

We hope that this analysis will allow us to decide on future building design in order to maximize the pig’s genetic potential and standardize building design. The analysis was not completed at the time the papers were due to be submitted, but will be presented at the session.

