

# Are heavier market hogs on the horizon for U.S. pork industry?

**A** RECENT article published by Bloomberg News titled “China’s Breeding Giant Pigs that are as Heavy as Polar Bears” provides some insight into one of the strategies China may be employing to bolster its domestic pork production in the face of unprecedented death loss from African swine fever (ASF).

Increasing the pork supply is, in theory, a simple matter of either increasing the number of pigs, increasing their market weight or both. While there is certainly no current shortage of pigs in the U.S., the prospect of taking part in filling the void in the global pork supply created from ASF looms large in the future.

The Bloomberg article highlights the extreme lengths to which some small backyard producers in China will go — feeding pigs to more than 1,000 lb. — to take advantage of the high demand for and domestic price of pork. While this extreme is well outside the bounds of practicality in modern production systems, it is a reminder that going bigger is an option worth consideration when markets provide the opportunity.

As an industry, we have been steadily increasing market weights for much of the last century. The Figure illustrates the increasing market weight trend in the pork industry that has taken place over the last 40 years, with an average increase of 1.15 lb. in carcass weight per year. This increasing market weight trend has been driven by improved efficiencies at both the producer and packer levels.

The Figure also clearly demonstrates an example in recent history of the industry responding to a supply interruption in 2014 caused by porcine epidemic diarrhea virus that resulted in pushing carcass weights to all-time highs of 212 lb. During this time, some packer grids were adjusted to encourage producers to market at heavier weights with less risk of penalties on the heavy side.

From a producer perspective, the economics of feeding hogs to heavier market weights are reliant not only on packer grids but also on the cost of feed, the feed efficiency of current genetics at heavier weights, the cost of finishing space and the market price.

A recent National Pork Board-funded study conducted at Kansas State University evaluated the performance of hogs

## Bottom Line

with  
**DUSTIN DEAN\***



fed to average liveweights as high as 377 lb., with various space allowances and marketing strategies.

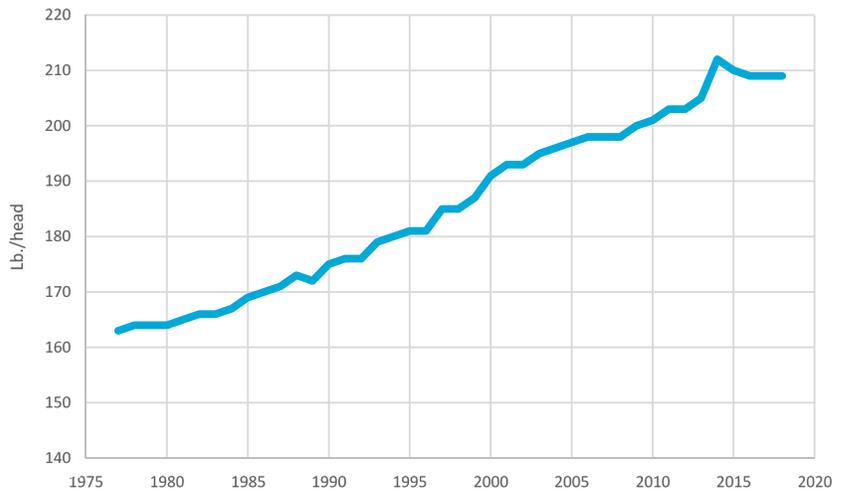
Interestingly, pigs in this study showed improvements in average daily gain (ADG) up until approximately 340 lb., with a feed efficiency near 3.5 for the period from approximately 280 lb. to 340 lb. Feed efficiency jumped to more than 4.0 as pigs were fed past 340 lb., suggesting a significant shift to fat deposition and an inflection point in the growth curve of the pigs in the study.

The Table estimates the marginal costs of increasing market weights from 290 lb. to 310 lb. based on an ADG of 2.0 and a feed:gain of 3.5 during this period. Using

reasonable current assumptions for a finishing feed cost of \$190 per ton, yardage of 12 cents per day and mortality costs of 7 cents per day, the marginal cost of carcass weight would be 56 cents/lb. Thus, with current feed costs and performance of modern genetics, it is relatively easy to justify heavier weights when finishing space is available and packer grids allow it without penalty.

The investigators of the heavy hog study also conducted evaluations of pork quality measurements and consumer acceptance, including consumer palatability panels. They reported potential benefits for heavier hogs in terms of eating quality and intent to purchase. However, it would seem that there are obvious limits in portion size of traditional pork retail cuts that would appeal to many consumers that must also be considered.

**U.S. pork carcass weights, 1977-2018**



## Marginal cost of increased market weight\*

Assumed market weight 1	290.0
Carcass weight 1 at 76% yield	220.4
Assumed market weight 2	310.0
Carcass weight 2 at 76% yield	235.6
Extra days on feed at 2.0 ADG	10
Yardage cost/head at 12 cents/day	1.20
Feed, lb./head at 3.5 feed:gain	70.0
Feed cost/head at 9.5 cents/lb.	6.65
Mortality cost/head at 7 cents/day	0.70
Carcass weight change, lb./head	15.2
Marginal cost of extra gain, \$/lb. carcass	0.56

\*Assumes no change in carcass discounts.

\*Dr. Dustin Dean is a senior nutritionist with NutriQuest.

## The Bottom Line

While market hogs the size of polar bears don't seem plausible anytime soon, the reality that modern swine genetics have growth curves that allow for relatively efficient growth to close to 340 lb. of live bodyweight provides the opportunity to push hogs heavier if needed, especially with low feed costs. Many factors have to be considered for the industry to shift to heavier market weights, including packer equipment constraints and market acceptance of larger primal and retail cuts.

Nonetheless, it seems probable that market opportunities in the near term relative to the ASF situation will motivate hog producers to push market

weights heavier, to the extent possible, to take advantage of incremental margins and maximize profit.

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