Season 1, Episode 10: The Economics Behind the Swine Industry

Dr. Derald Holtkamp and **Dr. Lee Schulz** of Iowa State University take us full circle around the swine industry. Dr. Holtkamp and Dr. Schulz discuss the economics behind the swine industry and how the two impact one another.

Pork markets

Consumers determine the derived demand of the pork markets, which can be complex and difficult to measure. Not only is it domestic demand, with 50/50 being in retail and grocery stores, but exports are also a tremendous market. The strong export demand has supported the growth seen in the industry over the past few years. Disease breaks are one of the biggest threats to the markets and the markets will show that negative impact in a couple different ways. When consumers hear of a disease and are undereducated, like with Porcine Epidemic Diarrhea in 2013, they start to see meat in stores as unsafe and unclean causing decreased demand. In other disease cases like African Swine Fever, there is extremely high mortality, causing supply to fall and demand unable to be met. It is important to understand the costs involved when disease impacts the pork markets.

Value

Two things happen when a pig dies. First, there is lost opportunity to gain revenue on that pig. Second, there is reduced variable costs to get that pig to market. It is important to consider the variable costs you are saving when a pig dies in that stage of production. Cost benefit analysis should be done when considering the cost of a disease and whether to implement a new vaccine protocol. When developing a new vaccine, they aim to predict the impact of the vaccine on the disease and the potential reduction in mortality. Analyze the dollar amount associated with the reduced mortality. Valuing the cost of mortality deeply depends on the market prices at any point in time. When challenged with disease, pigs will have larger weight variation coming out of the finisher.

Fixed cost and contract vs. non-contract

When it comes to pig loss and fixed cost, they are not really correlated because you are not constantly producing at break-even prices. Opportunity cost is more important because numbers are not static and market prices are always changing. Most commonly, people value a deceased pig at the amount they have already invested. However, this ignores the market price of the lost pig which is also important. Contract settings typically have different incentives, as they can get bonuses linked to key productivity measures, like mortality rate. Whereas other contract growers, who are not encouraged with these incentives, may not be as eager to reduce mortality and the cost typically lands on the owner.

Disease and economic models

Business economic models are valuable tools as they show trends and help evaluate numbers and impact. These tools enable you to adjust numbers in order to see potential impacts. The economic impact of mortality is multifactorial and is influenced by the pig itself, the environment, as well as viruses and bacteria. Maintaining herd immunity and reducing pathogen load is critical. Keep temperatures static and practice strict farm biosecurity to keep disease out. Death loss from severe disease outbreaks, for example Porcine Reproductive and Respiratory Syndrome, can impact overall market supply and demand. As a consumer of pork products, it is important to understand supply and demand in order to become better informed on factors, such as disease, that may impact markets and pricing.

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