The Marketing Journey of Cull Sows and Secondary Market Pigs

Dan Sutherland

Introduction

The swine industry continues to deal with the threat of emerging new diseases. Post production pig movement plays an important role in the transmission of these diseases. While the marketing journey for the movement of top hogs from farm to harvest is well understood, the marketing journey for cull sows, boars and secondary market pigs is more complex. The swine industry has indicated a need to better understand this industry and to determine the impact these issues have on disease proliferation.

The sale of secondary growing and finishing pigs, cull sows, and boars plays an important role in economic pork production. However, as animals are collected and mixed, these channels can be a source of disease transmission. Biosecurity and biocontainment can be very difficult when trucks, animals and people are regularly flowing in and out of these markets as they do business.

In the short-term, there can be risk to swine health from these markets concentrating multiple sources of endemic pathogens and transferring them to the next buying station or back to farms. In the longer term, these markets could become a risk either by helping to distribute foot and mouth disease (FMD), or another foreign animal disease, or by hindering the eradication of it after it is introduced into the U.S. Either of these scenarios could risk the viability of these markets and damage efficient and economic pork production.

To determine how to address these short- and long-term risk scenarios, more must be known about the movements of pigs in these market channels and the interconnections of these markets. The Swine Health Information Center (SHIC) requested a review and description of these market channels and the movement of swine in these cull and secondary markets.

SHIC would like to focus on the sale and movement of cull sows and boars from farm to packing plants and on the movement of secondary or light weight pigs on their way to market. The objective of this assessment is to gather information on the scope of these markets to better design surveillance, biocontainment or other risk mitigation protocols that may be used in the future.

Author’s Background and Credentials

I have been a part of the swine industry for 44 years with 10 years as an order buyer/dealer in public stockyards, and 34 years as a packer buyer who worked with dealers whose systems utilized auctions and private buying stations to market swine generally referred to as culls. This livestock market consists of boars, sows, light hogs, pigs that do not conform to market standards for top hogs, and other culls. Through my career, I have become intimately involved with the transportation and marketing of this type of livestock throughout Canada and the United States. This is a system that is unique and different from the marketing that is commonplace in the conventional butcher industry. Furthermore, I have been active in National Pork Producer Council and Pork Board projects that improve our industry to gain a broader perspective regarding industry issues.

Overview of Areas of Exploration

To get a better understanding of the process, we will follow the pig on its journey to market. We will review how producers deal with culls. Then we will follow the pig as it is transported from the farm to a dealer's buying station or collection point and eventually on to a packing plant. One size does not fit all and there is a wide variation in time and methods.

One first needs to understand that the cull marketing arena is entirely different than the conventional or top hog industry. Most hogs are raised to top hog specifications and then marketed only after meeting weight and condition requirements. In this system, the producer is responsible for arranging purchase and delivery schedules with a packer.

In the cull arena, breeding stock to be culled, light hogs, non-conforming hogs, and other livestock unfit for the conventional market are sold. The cull group is placed into a more specialized market that features niche or branded marketers who have created value in parts of the overall offerings. This market has large swings in demand due to seasonality of a product, ethnic holidays, the supply available, and the corresponding cost of product available to top hog processors. The sale of pigs in the secondary market is also impacted by weather, time of year, vaccination administration or other handling processes, manpower, and profitability cycles.

The supply of pigs in the secondary market comes at the will of the producer – unlike top hog marketing, which is specifically designated for delivery windows. Producers not only ship at will, but work to optimize their internal transportation fleet and barn personnel, which commonly focuses on Tuesday through Thursday to accomplish the majority of their cull marketing to dealers. With cull marketer's needs ranging from four to six days per week and from six to 10 hour workdays, this creates a gigantic puzzle.

In the past, only extreme conditions such as when sows flooded the market because of the Porcine Epidemic Diarrhea Virus outbreak did dealers have to say, "No mas," and not accept sows. They simply had no room in the inn. In most situations, however, dealer outlets are the surge protectors – especially in an era where packers are reluctant to hold livestock for extended periods due to operational efficiencies, enforcement by USDA-FSIS, and animal activist concerns.

The bottom line is that these marketing journeys are complex and may require a complex solution to manage the risks associated with disease transmission.

Scope of Cull Sows, Cull Boars and Secondary Pig Marketing Channels

Top hogs are hogs that meet specific qualifications set by major packers. Top hog sales make up approximately 94 percent of total pig harvest. The remaining 6 percent of pigs represent the secondary or alternative pig harvest. This market includes cull sows, cull boars and secondary market hogs that do not fit top hog qualifications and are sold through alternative or secondary cull market channels.

In 2016, cull sows comprised 2.4 percent of total harvest and cull boars comprised 0.3 percent of total harvest. While the percent of boars harvested in the past five years has remained constant, the percent of cull sows has dropped. It was at 2.7 percent in 2012. Prior to the adoption of artificial insemination technology, the percent of cull boars was somewhat higher.

Most Canadian sows and boars culled in Canada are harvested in the United States. Reported Canadian harvest indicates that boar harvest is non-existent and sow harvest is less than 80,000 head per year.

Light hogs, roasting pigs, and other culled livestock, which are considered secondary market hogs, make up the remaining secondary or alternative pig harvest. Neither USDA nor private industry reports these numbers, so I estimate this to be approximately 3 percent of total slaughter. With more than 110 million hogs marketed in the United States annually, the total number of cull sows, boars and secondary pigs marketed is significant.

The ages of cull sows, boars and secondary market pigs varies from weeks-old weaner pigs harvested for roasters to cull boars and sows that could approach seven years of age. The age and number within groups are determined by many cull marketing decisions including disease, cull residual value, re-population efforts, and market conditions. Routine marketing of cull sows from most herds is determined by breeding herd performance.

Alternative or secondary cull marketing channels have many different variations. Marketing has evolved over the past 40 years from primarily sales at terminal stockyards and auction markets to sales through dealers and dealer networks. Dealers have proliferated because of their focus on the secondary hog market. They identify niche markets and become supply chain champions who serve their producer customers when needed.

Collection Points for the Secondary Market Channels

It is important to understand that there are collection points and buying stations owned and operated by dealers for use in collecting, sorting, and holding pigs until they can be moved to their final destinations. These collection points are referred to as buying stations, dealer network facilities, or dealer's stations. Although dealers prefer to keep pigs at the buying stations or collection points for as short a time as possible, pigs can remain at these collection points for as little as a few hours or as long as a week if it is difficult to accumulate a critical mass – that is, a large enough group of similar pigs to fill an order. These collection points, like stockyards and auction facilities, are scraped regularly, but generally have no standard protocol for cleaning or disinfecting.

Examples of Cull and Secondary Market Pig Channels

Direct Sale from Farm to Harvest

While most producers today direct market their top hogs by negotiating directly with a packer, it is estimated that only 20 percent or less of cull sows, boars, and secondary market pigs are sold this way. These secondary market hogs, composed predominantly of light hogs, are shipped direct to a packer from the farm, but may include a stop at a secondary collection point where sort and/or further finishing can be accomplished.

Packer Sales through Dealer Networks

An area that has changed dramatically in the past 40 years is the sale of market hogs that arrive at a packing plant, but do not meet top hog specifications. Most of this marketing now occurs through a dealer network. Packers identify these secondary market pigs at the plant and sell them to dealers who then re-sell them through a secondary or alternative market channel. The majority of these hogs are transferred first to a dealer's buying station or collection point where the pigs are sorted and accumulated until a critical mass is met to market the hogs efficiently and effectively. In the past, more secondary market hogs, and even cull sows and boars, arrived at the plant with a load of top hogs. This does not happen as often now since most of these pigs are identified, sorted, and shipped separately.

Auction Market Sales

Auction market sales where pigs go directly to harvest from an auction barn are also declining. Most of these pigs now are purchased by a dealer at the auction barn and marketed through a dealer network. This usually includes at least one temporary transfer to a dealer's buying station or collection point.

Specialized Marketing Tools

There are several specialized marketing tools used by individual systems, companies or packing plants to market cull sows, boars, or secondary market pigs. In these cases, the services of a dealer or dealer network are not used.

One large integrator employs a specialized marketing company to manage the sale of their cull breeding stock and secondary market pigs. On the East Coast, the specialized marketing company owns and operates its own collection points for the collection, sort and sale of the breeding culls and secondary pigs. In the West, the company sub-contracts other dealers' stations and collection points to collect, sort and market their breeding culls and secondary pigs. In this case the collection points are rented from dealers but otherwise the dealers' services are not used.

The cull harvest network is another unique marketing tool that is used by only one packer in the South that buys only cull sows. Cull sows that arrive at their plant that do not meet their specifications are put up for sale by the packer and bid on by dealers on a weekly basis. The sows that are purchased by a dealer are then shipped to a dealer's buying station for sort and re-sale. The ability for this packer to market in this way is due specifically to the regulations of the state where it is located. Cull harvesters in other states cannot utilize this tool due to state animal health regulations or packer and stockyard regulations without a special temporary permit

A final type of unique marketing program used by a system on the East Coast moves their cull sows and secondary market pigs to a specialized barn owned by the system. There the sows and pigs are fed to optimal condition and are held to ensure that residue guidelines are met prior to shipment to the packer.

Dealers and Dealer Networks

Most cull sows, cull boars, and secondary market pigs are sold through a dealer network. This is a business that focuses on creating the critical mass needed to efficiently market hogs into many different channels within each category.

In the cull sow category, for example, up to four different packers can be utilized to gain the highest return due to their differing specifications in sow weight, condition, and quality. Geographic variation between the source farms and harvester locations coupled with transportation regulations determine marketing and movement decisions. These differences result in varying holding times and a variable number of movements at or between buying stations and collection points. The variability is necessary to either create the critical mass to ship full loads or to meet Department of Transportation regulations. Restrictions on the number of hours a trucker can remain on the road must be factored into the equation as well.

Dealer networks employ buying stations and collection points geographically dispersed throughout the United States and Canada. These sites are used to receive, sort, accumulate, and ship cull sows, boars, and secondary market pigs to their customers. This is accomplished by direct sales out of a specific collection point or by pickups and drop-offs at other collection points to accomplish specific needs of the customer. The goal is to coordinate movement and control transportation costs as much as possible. The pigs are often transferred from site to site to accommodate an imbalance of purchases on weekends, holidays, or surge supply factors.

Dealer networks vary the most due to location. Areas in the West, for example, necessitate longer hauls into the buying stations and collection points located in Nebraska or the Dakotas. This causes delays in marketing due to transportation time from farm to buying stations and collection points, appropriate resting time at these locations, and the eventual trip to the packer. This is also applicable to areas of the South and Canada where the location of livestock is spread over large geographic areas.

Dealer networks may also have different philosophies, business models, or offer different services. A dealer in a high-density region may only need eight buying stations or collection points to accumulate a critical mass of pigs by utilizing local sales or producers willing to ship their livestock to those collection points. Another dealer may employ as many as 45 buying stations to accommodate producer locations that are widely scattered. This model requires more truck stops or drop-offs at other buying stations or collection points to accommodate harvest orders. Both systems can handle a similar number of pigs to expedite marketing cull sows, boars, and secondary market pigs.

Seasonal Variations Associated with Cull Sows and Secondary Pig Markets

Seasonal variation in the cull sow market has lessened since modernized production methods have moved sows from outdoor production to indoor housing, but seasonal infertility in late summer still causes variability. The practice of aggressive culling of sows in the fall to prepare for less winter farrowing has become negligible.

This market is also affected by seasonal consumer demands. For example, some cull sow markets that focus on the sale of brats may cater to the grilling season of March through August, while another cull sow market featuring breakfast sausage may cater to a market that peaks in August through December.

The secondary pig market will also rise and fall depending on the number of top hogs produced, disease prevalence, demands of niche harvesters, and other issues, so as top hog seasonality changes, so does the secondary pig market.

Finally, the seasonal demands of crop farming slow the marketing of cull sows and secondary market hogs, but the cull sow market is affected more because of personnel shortages and the deployment of farm staff to field work.

Range of Movement and Time Spent in Secondary Pig Market Channels

As mentioned previously, the range of movement varies depending on geography, hog density, supply and demand equilibrium, time of year, corresponding demand of niche marketers, the price of traditional top hog cuts, disease issues that cause culling, and weather that impacts transportation. Hogs may move 1,500 miles or more on their way to market. In general, cull sows, cull boars, and secondary market hogs move significantly farther than top hogs. While top hog transport may vary in increments of tens of miles, secondary market hog transport may vary in increments of hundreds of miles.

The marketing needs of niche and branded harvesters create added value for producers, but often result in longer shipping distances. It takes additional time to accumulate and transport groups of pigs to niche harvesters because these pigs originate from unintended/unplanned production that is produced in an inconsistent manner by varied suppliers across the country.

Additional Variables in Marketing Timelines

Time sows and pigs spend in marketing channels is variable because of several factors additional to market conditions and others already discussed. For example, there may be inconsistency in the time between the decision and intent to market a culled sow and the sow’s actual delivery to the market. In one case, a producer made the culling decision and recorded that movement on a Monday but the producer didn’t ship the sow to the buyer until after business ended on the following Thursday. Arriving on Thursday in turn caused the animal to be shipped to the packer for processing on Monday, the first possible opportunity. When traced, according to the records, it appeared the animal was in the marketing channel for one week when that wasn’t the case.

In addition, the packer may not process the animal on the day received for many different reasons including, for example, breakdowns and labor shortage. Additional movements from one market station to another within the marketing channel may also happen, resulting in delayed processing. And there may be delays within the marketing chain caused by the need to investigate and address animal health needs. For example, a sow may be held at the buyer’s station for an extended period due to signs of Seneca Valley Virus infection. Records would show that the sow was in marketing channels for over three weeks but this was caused by rule and regulation, not market choices.

These are several examples offered by buyers and are examples of only some possible scenarios. It must be remembered that, while many factors may affect marketing times, simple economics dictate that the animals try to be held within the market channel for as short a time as possible, as time costs money.

Inspection and Regulatory Requirements for Movement within Secondary Market Channels

Requirements for the inspection of livestock at packing plants and harvest facilities are found in section 603 of the Federal Meat Inspection Act. Regulatory personnel perform inspections at the harvest plant. However, depending upon the inspector, district, and type of harvest facility, the inspection process can vary considerably. Each individual hog is required to have an ante-mortem inspection but the intensity of this inspection varies considerably. An inspector may demand to see 100 percent of the pigs in movement or require that only a small percentage be observed as they move from pen into alley. In some cases, the inspector may just peer over the fence. Determination of suspect hogs is variable and can be subjective, depending on the individual inspector.

On rare occasion, a state inspector will visit a buying station or collection point to inspect that facility, but there is no regularly scheduled inspection required for these sites.

Five years ago, an effort was made by a major sow packer to create consistent guidelines for all dealers. They enlisted dealers in a program whose origins were compiled from Pork Quality Assurance Plus, Transport Quality Assurance, National Animal Meat Institute, Animal Welfare Policy and WE Care Principles coupled with regulatory guidelines. Validus, an independent auditing company, assisted in developing and testing the protocol. It was administered and offered to other packers. The number of participating packers and dealers has grown to include more than 85 percent of the total sow and boar harvest and is now a requirement for purchase. Validus audits and ensures that the corresponding requirements are met.

Group or Individual Animal Identification for Recording or Tracking Movements

Some type of sow and boar identification is required by the USDA but no specific system is mandated. A regulated back tag used to be placed on the pigs at the first point of concentration and was utilized for the past 40 years. This system proved to be ineffective because fewer than 20 percent of the tags reached the collection point in plants. The back tag system has been replaced, in large part, by an ear tag system that is an official identification option for producers but not required by USDA. The producer must apply the tag prior to leaving the farm. This system offers confidentiality to the producer because their name and location is not on the tag, nor is it readily available to the dealer or packer. Only the premises identification number is on the tag. This system works well with a 95 percent tag retention level. The tag is utilized by the USDA inspection process and requires that the packer keep the tag associated with the sow or boar through the inspection process. It can only be removed once the sow passes post mortem inspection.

If the need arises, USDA can ask the plant for the tag information and has authority to obtain the identity of the producer for further review and discussion. The premises identification, the sale lot, and information provided by a dealer can help trace the marketing journey of that pig. The use of this tag is not a requirement but only encouraged by USDA. However, to create a more effective system and utilize this new tool to its fullest, sow packers have made it a requirement of sale.

Transportation

There are two prevalent transportation scenarios that take place in moving cull sows, cull boars, and secondary pigs to market: first the farm-to-dealer transport then the dealer-to-packer transport. In the producer scenario, much care is taken due to the biosecurity policies of the producer. Generally, they provide the transportation to the dealer and decide the involvement of their driver as well as mandating whether specific docks are to be utilized and what disinfection procedure at unloading must occur. The yards of most dealers are scraped but not washed or disinfected.

When pigs are moved from the dealer collection points to the packer, approximately 80 percent of trucks are contracted while 20 percent of trucks are dealer owned. Regardless of ownership, these trucks are also utilized for backloads hauling other hogs or cattle. The only requirement of packers is that the trucks and trailers contain clean, fresh bedding. Packers do not require any washout or disinfection procedures. At the plants as well as at dealer buying stations and collection points, drivers generally load and unload livestock. At plants, most offer a way for cleaning and disinfecting boots but not trucks.

Summary

Approximately 6 percent of the pigs marketed in the United States are considered culls or secondary market pigs. Maintaining this market is financially important for pork producers and consumers. The marketing channels for these pigs are far more complex and varied than that of the conventional top pig markets. The description of cull and secondary pig marketing channels presented in this paper helps to clarify the challenges associated with managing disease transmission of current pathogens and identifies additional risks associated with controlling a foreign animal disease outbreak.