

Adding Value to Fresh Pork

The Canadian pork industry is facing enormous challenges. Martin Gooch, Dan Laplain and Abdel Felfel from the Value Chain Management Centre took a Total Quality Management approach to identify opportunities to improve the performance of a fresh pork value chain. The cooperation of the value chain participants and the industry experts who provided feedback during the research is greatly appreciated.

BACKGROUND

Focusing primarily on cost cutting and productivity is unlikely to produce the long-term results achieved by implementing only those processes necessary for creating value from consumers' perspectives. The benefits of taking the 'Toyota' approach to business, where the entire chain works collaboratively to continually increase the effectiveness and efficiency with which it creates value for consumers, include loyal repeat consumers, stronger business relationships, higher levels of innovation, reduced costs, and greater profitability.

In order to identify opportunities to capture greater value from producing, processing and retailing fresh pork, the Value Chain Management Centre undertook a high level study of the current state of a fresh pork value chain, stretching from farm to consumer. Information gathered from the recent 'Consumer Data for Farmers' project was then used to identify opportunities for the chain to benefit by creating greater value for consumers.

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PURPOSE

Fresh pork's journey from farms to consumers involves several steps. If any of those steps is not sufficiently focused on maximizing the value proposition of fresh pork from consumers' perspectives, the cumulative impact on the profitability of individual businesses, and the entire value chain, can be significant.

The purpose of this study is not to apportion blame or to criticize. Rather, it seeks to present an objective assessment of current operations performed along the chain, and to propose ways individual elements of the pork value chain could work together more effectively to deliver increased value to consumers.

The study and review were developed by observing a chain supplying fresh pork to a specific market. For commercially sensitive reasons, the chain observed for this study is anonymous. To ensure that the incidents and opportunities described are of value to the wider industry, they have been validated through discussions with representatives from other chains and the Canadian pork industry.

INTRODUCTION

Significantly improving the performance of a fresh pork value chain may require only minor improvements at multiple points of the value chain. The summation of those improvements could enable participants to capture greater value from their activities and improve their profitability. While opportunities to enhance performance can often be easily identified, sustaining any advancement relies on the existence and application of an improved performance reporting system. It also relies on the chain possessing the discipline to reward those who are performing beyond minimal requirements while penalizing those who are not.

Issues that impact the chain's performance include:

- The mechanism currently in place to price hogs is used because it is widely accepted and change is challenging; it is not used because it is known to be the most appropriate system for incentivizing the production of fresh pork which is valued by customers;
- The current price discovery processes can lead to chain participants unduly focusing on doing things right (efficiency) rather than focusing on doing the right things (effectiveness);
- Fresh pork is not merchandized well. Instead, the focus is on encouraging consumers to purchase fresh pork at discount prices, and having sufficient volume to meet the resulting demand;
- Producing fresh pork from a standard generic hog can diminish the overall value that consumers perceive fresh pork to offer compared to alternative meats and other proteins;
- The effectiveness of value chain operations is compromised by a lack of information sharing throughout the chain;

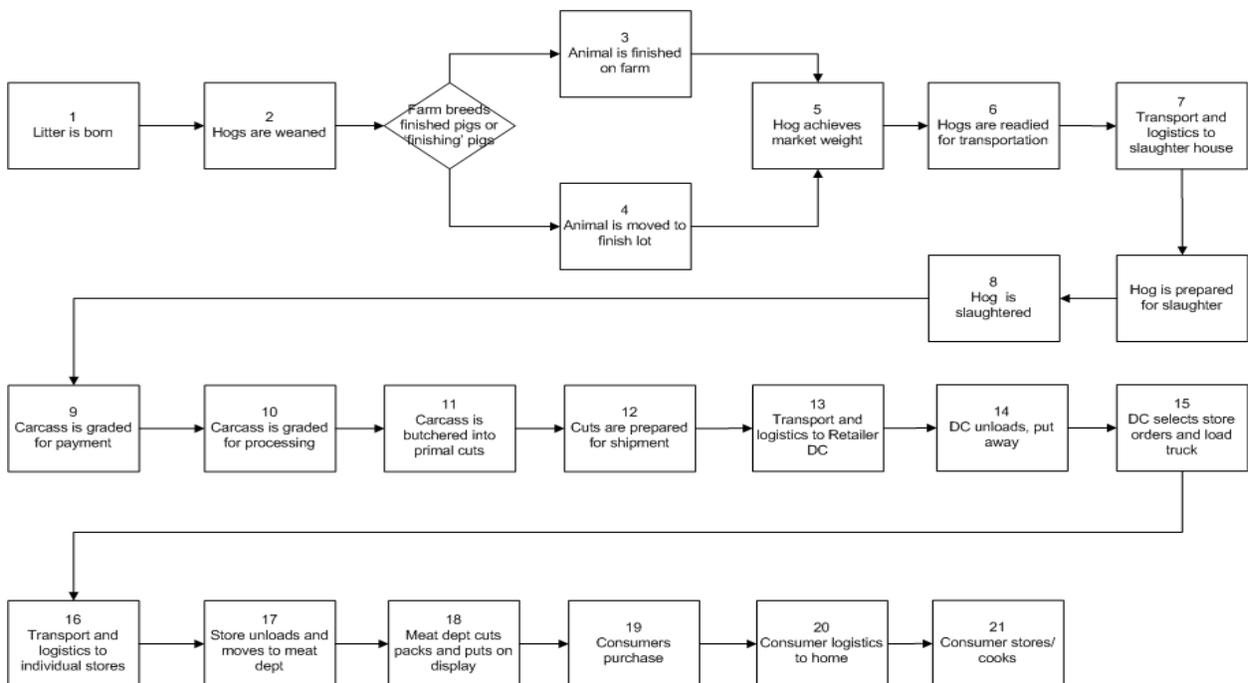
- Key participants of the chain possess unshared information that, if shared, could guide improvements at multiple levels of the chain;
- Retail promotions can create demand and supply imbalances, which unnecessarily increase costs along the chain;
- The chain exhibits a tendency to focus on maximizing capacity rather than value that could be captured through aligning operations to better meet market demands;
- The chain is largely managed according to transactional measures that have little correlation to consumer demands toward the meats they choose to consume;
- Current performance measures do not encourage chain participants to stop treating pork as a commodity that possesses little intrinsic value.

The above indicates that opportunities exist to capture potentially significant added value through developing more detailed insights into consumers' desires and behaviours. These insights could then be used to establish more effective performance criteria along the value chain, which are currently being missed.

“The last significant innovation in pork occurred in the 1960’s”
Director, Meat Merchandizing

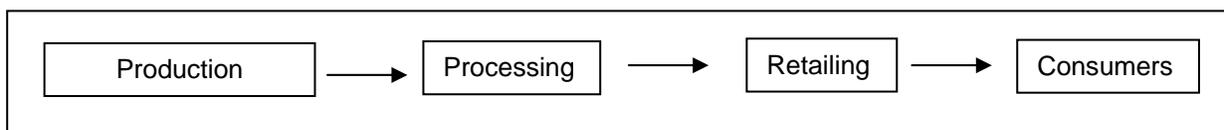
VALUE CHAIN MAP

Figure 1 presents the schematic of the fresh pork value chain used as the basis of this study. It involves farrow to finish and finishing hog operations, a processor that slaughters 80,000 hogs annually, and a retailer.



While this map has 21 major steps, each a summation of many interrelated activities, Figure 2 shows that the chain essentially operates as four distinctly separate units. While overlaps occur between each of the four units, our observations suggest that many of the management processes at each unit along the chain operate in relative isolation to the others.

Figure 2: Operational Units



Interviews with members of this and other pork value chains suggested that the present situation culminates from a number of factors:

- Primary producers, processors, and retailers each expect the other to exhibit predatory business approaches should they share all but immediate transactional information;
- Each member follows a tendency to sell, rather than market, products;
- Each member possesses an ardent belief that focusing on productivity (maximum volume at minimum cost) is the most effective method to address business risks;
- Governance practices limit each player's desire to work closer with other members of the value chain to increase the overall value of the pork category through market-focused innovation;
- Performance is reported in terms of operational units rather than chain length activities.

An example of how these factors translate into limited ability to capture value by improving consumers' satisfaction was relayed to us by a senior retail representative. He stated that **“supplier performance is largely measured by consistency of delivery and price, and incentives are provided according to how much money the retailer can save, rather than the quality of the meat being supplied.”** It was also noted that this situation is exacerbated by retailers often taking a short-term predatory approach to growing meat sales by attempting to jump ahead of their competitors, and regularly discounting the cuts that consumers value the most. Little effort is placed on growing the overall value of the fresh pork category by using consumer insights to develop innovative products, processes and marketing strategies.

Upstream opportunities to create value are also being missed. A processor representative stated that “producers are rewarded for the absence of fat, not the occurrence of high quality muscle.” As well, many primary producers do not seek to identify processes to reduce their production costs or increase their margins. “We have suppliers following at least 20 types of production systems and no one really knows the system that produces the best (fresh) pork.”

Beyond transactional metrics such as price and weight, little currently connects the entire chain in capturing value from supplying fresh pork to increasingly discerning consumers. **Yet the attributes that influence consumers' purchase decisions extend beyond factors such as the size of cut and price per kilo.** The remainder of this commentary explores opportunities for the value chain to benefit from introducing new processes that could lead to an increase in consumers' perceptions that pork offers a high value proposition.

CONSUMERS' DEFINITION OF VALUE

Identifying opportunities to improve the performance of a fresh pork value chain began by evaluating results from the 'Consumer Data for Farmers' project, which tracked consumer perceptions of 16 attributes relating to purchase, preparation and consumption of fresh pork. Distinct differences were found in the extent to which each of the 16 attributes influence consumers' perceptions toward fresh pork. These findings enabled researchers to identify how Critical to Satisfaction (CTS) each of the attributes was in defining the value of fresh pork from consumers' perspectives. Relative importance of each of the 16 factors and consumers' satisfaction that their expectations are being met are summarized below.

The CTS criteria were designed by Ipsos Forward in conjunction with the Value Chain Management Centre and the Canadian Pork Council. The 16 attributes are as follows:

- Taste
- Tenderness
- Freshness
- Consistency in quality
- Overall healthiness
- The whole family will eat it
- Affordable price
- Value for money
- Quick to prepare
- Versatile
- Appropriate sizes of the cuts
- Availability of recipes
- Availability of desired cuts
- Available in a variety of quick to prepare products
- Easy to locate in the store
- Easy to prepare from scratch

The relative importance of each attribute in shaping consumers' overall perception of the value of fresh pork came from the results of ranking each attribute on a scale of 1 to 10.

- A score of 8, 9 or 10 would be a potential deal breaker. If a particular requirement cannot be satisfied, consumers will not buy the product.
- 5, 6 and 7 are important. Consumers may buy the product now, but will likely look for alternatives if dissatisfied with the product's performance when preparing and/or consuming it.
- 2, 3 and 4 are of low importance, and may not influence consumers' purchase decisions but could create opportunities to 'delight' consumers, making the product and/or the retailer the one of choice.

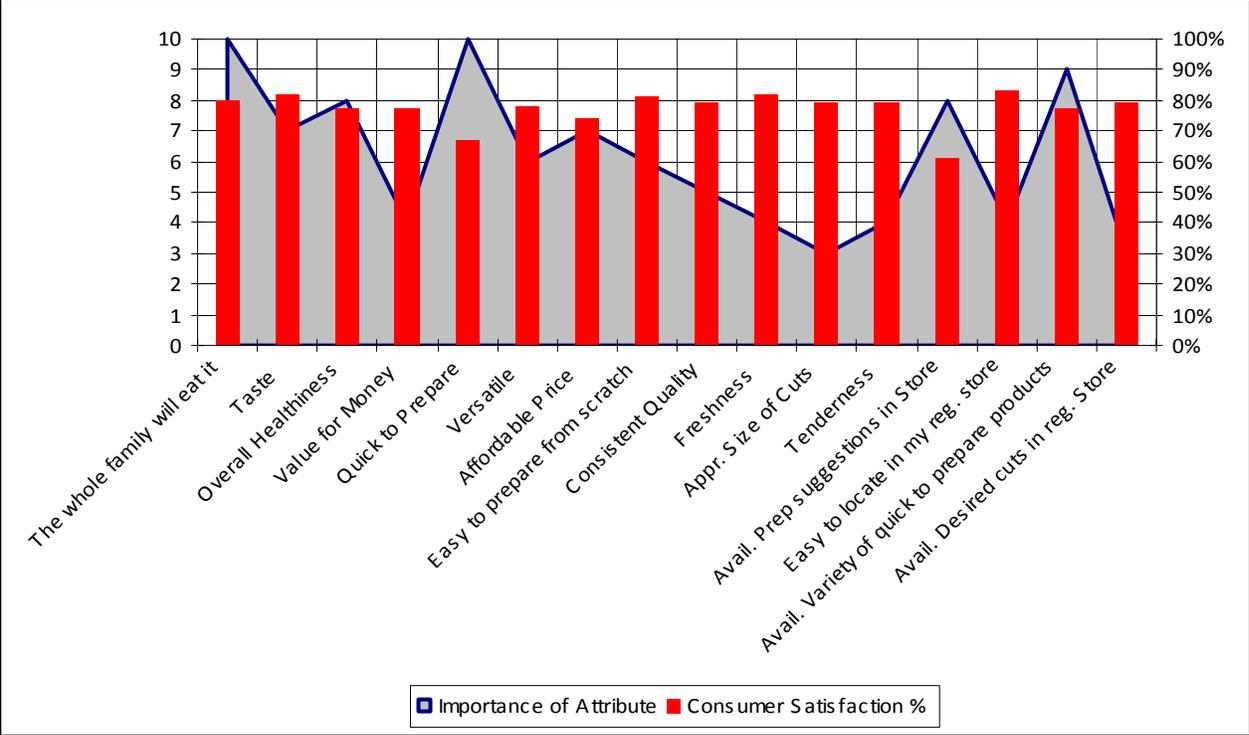
Figure 3 shows the relative importance of each of the 16 attributes tracked. It also shows how well consumers feel fresh pork currently performs across each of those attributes, compared to their expectations.

Figure 3: Consumers' Critical to Satisfaction and Satisfaction scores for pork

| | | | | | | | | | | | | | | | | |
|---------------------------------|------------------------------|-------|---------------------|-----------------|------------------|---|------------------|------------------------------|------------------------|-----------|-------------------------------|------------|---|------------------------------------|---|--|
| | The whole family will eat it | Taste | Overall healthiness | Value for money | Quick to prepare | Versatile - can be prepared in a wide variety of ways | Affordable price | Easy to prepare from scratch | Consistency in quality | Freshness | Appropriate sizes of the cuts | Tenderness | Availability of recipes, preparation and serving suggestions in the store | Easy to locate in my regular store | Available in a variety of quick to prepare products | Availability of the desired cuts in my regular store |
| Critical To Satisfaction | 10 | 7 | 8 | 4 | 10 | 6 | 7 | 6 | 5 | 4 | 3 | 4 | 8 | 4 | 9 | 3 |
| Satisfaction | 80% | 82% | 77% | 77% | 67% | 78% | 74% | 81% | 79% | 82% | 79% | 79% | 61% | 83% | 77% | 79% |

Figure 4 illustrates the same information as above, though schematically. 100% means that pork consumers are highly satisfied that the attribute is meeting their expectations.

Figure 4: Consumers' Critical to Satisfaction and Satisfaction scores for pork (shown schematically)



As illustrated, the importance of different attributes surrounding the purchase, preparation and consumption of fresh pork and the relative satisfaction consumers feel toward their expectations being met, vary considerably across the 16 attributes. **Results show that fresh pork performs least favourably on the attributes which can have the greatest influence on consumers' perceptions toward the value proposition offered by fresh pork.** They also show that price is only the sixth most important factor influencing consumers' satisfaction with fresh pork.

Furthermore, consumers who distinctly rated pork as performing below their expectations said that fresh pork performed worst on tenderness, followed by texture and taste. Simultaneously, core pork consumers are less likely to rate pork as overly fatty or unhealthy.

For simplicity we have separated specific attributes into 'Must have' (a deal breaker if not provided as an attribute of the product), 'Should have' (a commonly expected attribute that suppliers 'play ball') and 'Would be nice to have' (a delighter that sets it apart from competing products).

'Must have' attributes:

- The whole family will eat it
- Healthy choice
- Easy to prepare
- Availability of recipes, preparation and serving instructions in my store
- Availability of quick to prepare products

'Should have' attributes:

- Affordable price
- Taste
- Versatile – can prepare in a number of different ways
- Easy to prepare from scratch
- Consistency in quality

'Nice to have/delighter' attributes:

- Meat attributes
 - * Freshness
 - * Tenderness
- Retailer/pork category marketing attributes
 - * Value for money
 - * Appropriate sizes of cuts
 - * Availability of the desired cuts in the store
 - * Easy to locate in the store

SUMMARY OF CTS RESULTS

In summary, the CTS results suggest that opportunities to add value to fresh pork are currently being missed as the chain focuses mostly on price and volume, ahead of determining how it could deliver superior value to fresh pork consumers.

The five drivers of purchase that rated higher in importance than price include “The whole family will eat it” (importance of 10, satisfaction 80%), and “Availability of recipes, preparation and serving instructions in my store” (importance of 8, satisfaction 60%). The following are also worth noting:

- This information comes from regular consumers of pork. Therefore, the current gap between the relative importance of “*The whole family will eat it*” and other attributes would likely be greater amongst those who consume fresh pork less frequently.
- Core pork consumers exhibit higher than average levels of dissatisfaction toward the availability of pork recipes and information on preparation methods at the point of sale.

The first point shows that the chain is missing an opportunity to encourage non-core consumers to consume fresh pork more frequently. The second point shows that suppliers are not meeting the expectations of core pork consumers, their most important target market.

Addressing opportunities

While the analysis has identified opportunities to improve the performance of fresh pork, sustaining any improvements will rely on the creation of a more meaningful performance reporting system. It will also require discipline by the chain to reward those who are performing beyond minimal requirements, while penalizing those who are not.

The matrix in Figure 5 uses the principles of Total Quality Management to illustrate how a value chain might use the information presented to increase sales and capture added value from producing, processing and merchandizing fresh pork. It illustrates where the research suggests a relationship exists between the tracked CTS attributes and processes performed along the value chain, as well as the potential strength of each association. Changing how processes are managed, particularly where a strong relationship exists between the process and the CTS attribute, could increase the value proposition that consumers perceive fresh pork to offer.

Keys to understanding Figure 5:

- Where a consumer attribute is affected by a step in the value chain, there is an association.
 - * No score means no defined association exists between a process and a CTS attribute.
 - * The strength of any association between a process and a CTS attribute is scored on a scale of 1 to 10.
 - A score of 1 signifies a very weak association
 - A score of 10 signifies a very strong association
 - Association scores for each cell are multiplied by the consumer CTS score. Row and column scores are totaled.
- Columns with low scores or few association points likely indicate a consumer CTS that is either not addressed or is addressed at only one or two points along the value chain.
- Rows with low scores or few association points likely indicate a value stream element that is non value added or waste because it does not create much value from the perspective of consumers. In either case, the row represents elements of the value chain that offer an opportunity to reduce cost or increase value for consumers.
- Rows with high scores represent elements of the value chain that have significant impact on consumer CTS. These elements should be controlled and managed carefully.

Figure 5: Relationships Between Value Chain Elements and CTS Attributes

| | The whole family will eat it | Taste | Overall healthiness | Value for money | Quick to prepare | Versatile - can be prepared in a wide variety of ways | Affordable price | Easy to prepare from scratch | Consistency in quality | Freshness | Appropriate sizes of the cuts | Tenderness | Availability of recipes, preparation and serving suggestions in the store | Easy to locate in my regular store | Available in a variety of quick to prepare products | Availability of the desired cuts in my regular store | VC element association score | % contribution to consumer CTS |
|---------------------------------|------------------------------|------------|---------------------|-----------------|------------------|---|------------------|------------------------------|------------------------|------------|-------------------------------|------------|---|------------------------------------|---|--|------------------------------|--------------------------------|
| Consumer criticality score | 10 | 7 | 8 | 4 | 10 | 6 | 7 | 6 | 5 | 4 | 3 | 4 | 8 | 4 | 9 | 3 | | |
| Consumer satisfaction | 80% | 82% | 77% | 77% | 67% | 78% | 74% | 81% | 79% | 82% | 79% | 79% | 61% | 83% | 77% | 79% | | |
| Store display/meat counter | 8 | 7 | 7 | 8 | 9 | 9 | 9 | 7 | 9 | 9 | 6 | 3 | 9 | 9 | | 9 | 712 | 17% |
| Retailer operations | 6 | | | 7 | | | 7 | | 9 | 9 | | 6 | | 9 | 9 | 9 | 386 | 9% |
| Retailer procurement | 6 | 9 | 8 | 9 | 6 | 3 | 9 | 4 | 9 | 9 | 8 | 7 | | | 9 | 9 | 629 | 15% |
| Distribution and logistics | 5 | 4 | 3 | 6 | | | 6 | | 6 | 9 | | 3 | | | | | 246 | 6% |
| Cool chain and transportation | 4 | 4 | | | | | 4 | | 7 | 9 | | 3 | | | | | 179 | 4% |
| Cut pack and label | 7 | 7 | 9 | 9 | 9 | 9 | 8 | 9 | 9 | 9 | 9 | 7 | 9 | | 9 | 9 | 797 | 19% |
| Post kill cooling and logistics | 6 | 7 | | 6 | | | 4 | | 8 | 9 | | 6 | | | | | 261 | 6% |
| Slaughter | | 4 | | 5 | | 2 | | | 8 | 3 | | 9 | | | | | 148 | 4% |
| Animal Sale/Purchase | 2 | | | | | | 6 | | 6 | | 6 | 3 | | | | | 122 | 3% |
| Housing and handling | 3 | | 8 | 3 | | | 6 | | 5 | | 3 | 6 | | | | | 206 | 5% |
| Animal genetics | 3 | 6 | 5 | 6 | | | 3 | | 5 | | 6 | 6 | | | | | 224 | 5% |
| Production system and feed | 4 | 6 | 9 | 5 | | 3 | 6 | | 5 | | 6 | 9 | | | | | 313 | 7% |
| 4223 | 540 | 378 | 392 | 256 | 240 | 156 | 476 | 120 | 430 | 264 | 132 | 272 | 144 | 72 | 243 | 108 | 4223 | 100% |

Figure 6 schematically illustrates the potential impact that each element of the value chain has on enabling the chain to capture added value from producing, processing and marketing fresh pork.

Figure 6: Importance of Each Value Chain Element to Creating Value

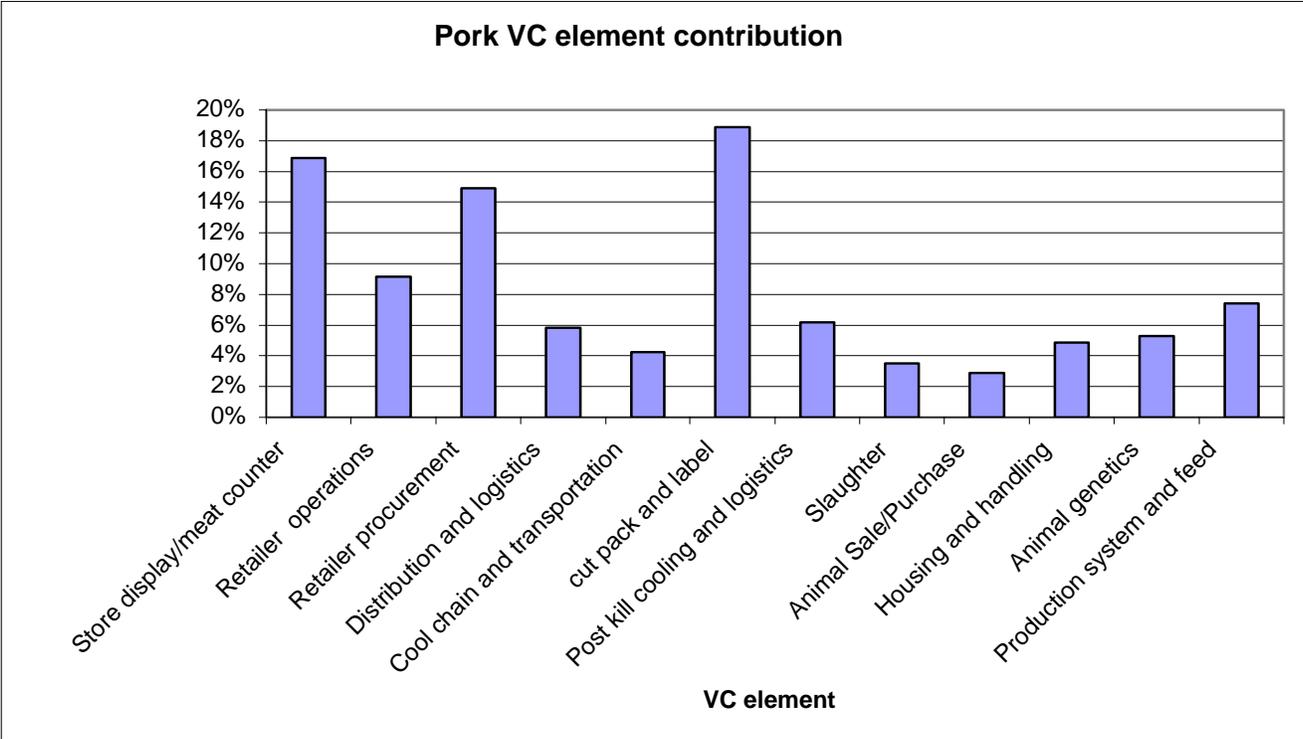


Figure 6 identifies the most important value chain elements:

1. Cut pack and label
2. Store display/meat counter
3. Retailer procurement
4. Retailer operations
5. Grouped factors relating to hog production

The first four value chain elements affect approximately 60% of consumer satisfaction. The fifth value chain element, "Grouped factors relating to hog production", affects 22% of consumer satisfaction.

Managing and controlling these value chain elements and their supporting processes is critical to success.

Suggestions follow for ways the chain could evaluate the effectiveness of each of these value chain elements and improve their value generating capability, by answering the questions posed.

1. Cut pack and label

- What percentage of packaged fresh pork is visually appealing to consumers?
- Who determines cut size, presentation and packaging format?
- What information is currently used to determination the current configuration?
- Does the processor measure conformance to specifications?
- What percentage of labels provides useful information other than weight and price?
- What percentage of product is written off as shrinkage?
- Are practices that contribute to waste tracked statistically?

2. Store display/meat counter

- Most shoppers are female. Is the meat counter organized to suit female thoughts and selection criteria, or is it organized from a male perspective?
- Are cooking instructions and product information readily available at the counter?
- Are meat department employees on the floor talking to and helping customers, or do consumers rely on the self-service principle?

3. Retailer procurement

- Do retailers and processors work collaboratively to provide what consumers require?
- Do retailers provide processors with meaningful forecasts and performance reports?
- Do the forecasts provided to processors reflect the seasonality of purchase choice and supply?
- Are the purchase orders received early enough for the processor to plan and balance carcasses?
- Do retail buyers have meaningful information on consumers' purchasing behaviours and attitudes?
- Do consumers' perceptions of quality factor into supplier performance?

4. Retailer operations

- Have front line retail staff members visited a meat processor?
- Are front line retail staff members fully familiar with the meat they prepare, pack and sell?
- Could front line staff members tell consumers how to prepare, cook and serve the product?
- Does the retailer conduct experiments to determine which predictors increase consumer satisfaction and sales?

5. Grouped factors relating to hog production

While no individual factor relating to hog production has the same level of importance as the factors described above, cumulatively they account for 22% of consumer satisfaction and, therefore, have the potential to significantly impact consumer satisfaction.

- Are producers provided with retail performance and consumer satisfaction information?
- Are experiments undertaken to identify the comparative impact each stage of the hog production process (including the hog age and weight at slaughter, and feed / management system) has on meat quality?

DISCUSSION ON A SPECIFIC EXAMPLE OF AN OPPORTUNITY TO INCREASE VALUE TO CONSUMERS

Increasing the value proposition of this particular chain will require the producers, the processor and the retailer to work together, clearly defining which factors influence the CTS attributes of fresh pork. While accomplishing this would rely on the retailer periodically issuing the processor with a score card indicating the extent to which the processors' products met consumer CTS, the reporting process need not be exhaustive.

Based on indicators developed from the CTS research findings and input from the retailer, the next stage would be for the processor to provide producers with a quarterly scorecard indicating how well their pork met minimum performance requirements. Ideally, they would also provide producers with one-on-one coaching as to how to improve the quality of the meat (hogs) they produce.

Improving processes relative to consumer defined CTS would enable the entire chain to reduce costs and increase quality. Along with the opportunity to increase revenues by reacting to consumer defined CTS, this would enable the producers, processor and retailer to increase their profit margins. Making the change sustainable would depend on everyone receiving sufficient financial incentives to remain loyal to the process, and designing experiments to test new products and processes to determine whether they increase the value of fresh pork from the perspective of consumers.

An example of a possible process improvement experiment follows. As mentioned previously, the CTS criteria for availability of product information, which would include preparation, cooking and serving instructions, scored an 8. Therefore, it is a deal breaker. Consumer satisfaction with the availability of required information is only 61%. There are only two steps in the value chain that would provide the recipe-type information – packaging and point of sale. Each scored a 9, meaning they have a high impact on the ability to satisfy these particular consumer satisfaction criteria. These two elements of the value chain need to be innovative, well managed and controlled through regular performance review by management.

One suggestion to investigate would be whether or not the obvious availability of recipe, preparation and serving instructions causes consumers to purchase more pork and perceive pork as offering a higher overall value proposition.

The retailer and processor could test this hypothesis by running a pilot whereby product information and preparation, cooking and serving instructions are promoted, and changes in sales tracked. A suggested format would be as follows:

- Decide upon region(s) to conduct the pilot;
- Select the most appropriate demographic to target;
- Validate past sales volume for the selected demographic in that region;
- Select the media for providing product information and preparation, cooking and serving instructions;
- Promote the pilot and the value added information;
- Launch the pilot;
- Monitor sales for the duration of the pilot;
- Analyze the results; and
- Decide on next actions and implementation plan as appropriate.

Another more challenging experiment could involve slaughtering hogs at a younger age to identify, as is the case in a number of other countries, whether pork from smaller, younger hogs produces more succulent meat and a more pleasurable eating experience. Producing a smaller hog could reduce production costs and, simultaneously, increase the opportunity to capture higher value by delivering products that appeal more to consumers than the present fresh pork offering.

Improving process and product performance relies on the ability to monitor and regularly report the results of experiments designed to increase the quality of fresh pork from the perspective of consumers. Figure 7 suggests a reporting system that could be used to monitor the value chain's performance. It is based on reporting approaches that have been successfully applied in other industries.

Figure 7: Suggested Value Chain Report Cards

| Retailer Report to Processor/Packer | |
|--|----------------|
| Attribute | Measure |
| Past Performance | |
| Total volume | Kg trend |
| Shrinkage | Kg trend |
| Sales | \$ trend |
| Placement in category | Rank or % |
| On time deliveries | % |
| Consumer complaints | # |
| Store complaints | # |
| DC complaints | # |
| Objective 1 | KPI and trend |
| Objective 2 | KPI and trend |
| Objective 3 | KPI and trend |
| Future performance | |
| Forecast for next 3 months | Kg |
| Quality requirements for next 12 months | Specify |
| Innovation needs for next 12 months | Specify |
| Recommendations | Specify |

| Processor/Packer Report to Producer | |
|--|-----------------------|
| Attribute | Measure |
| Past Performance | |
| Total volume | Kg trend |
| Variation | Kg Standard Deviation |
| Value | \$ trend |
| Yield | % and trend |
| Premium product | % and trend |
| Downgraded product | % and trend |
| Position as a supplier | Rank |
| On time deliveries | % |
| Objective 1 | KPI and trend |
| Objective 2 | KPI and trend |
| Objective 3 | KPI and trend |
| Future performance | |
| Forecast for next 3 months | Animals |
| Quality requirements for next 12 months | Specify |
| Innovation needs for next 12 months | Specify |
| Recommendations | Specify |

These reporting formats would enable the transfer of potentially valuable information along the entire value chain. The retailer would provide the processor with regular feedback on product performance compared to other suppliers of fresh pork, and the performance of fresh pork within the pork overall category overall. The processor would then provide producers with a quarterly score card that indicated how well their pork met standards based on CTS factors, along with identified areas for improvement. With an emphasis on ways producers could improve the quality of their meat products to improve margins and capture premiums where possible, the processor would then provide one-on-one coaching to discourage producers from considering pork an undifferentiated commodity, thus enabling the processor to retailer component of the chain to exploit the resulting value-generating opportunities.

