

# Industry Structure/Integration: What are the Options for the Canadian Pork Industry?

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## ■ Introduction

The Canadian pork industry is poised to build on its current position as the world's largest pork exporter. Indeed Canada stands in a most interesting position as the largest production surplus region in closest proximity to the world's largest and fastest growing food deficit region – the Pacific Rim. Broad developments worldwide – particularly in Western Europe, suggest that as a major supplier of pork, Europe's position will diminish over time in response to growing environmental, social and competitive pressures. In contrast, the massive restructuring of the U.S. industry, as well as low cost of production in regions such as Brazil, pose new competitive threats to the Canada's position as the leading exporter.

Despite public concerns over large-scale confined livestock operations, Canada has considerable expansion capacity specific to hog production. Nowhere is this more true than in Western Canada. Hog densities in the West are very low in comparison to many hog production regions around the world. For example, hog population density in the Netherlands is 38 times greater than in Alberta; it is 30 times greater in Denmark (Toma & Bouma, 2000). Somewhat closer to home, Dupin County in North Carolina has a larger hog population than the entire Alberta inventory and a density factor that is 183 times greater.

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The prospect for substantial future growth raises the question of optimal structures and strategies. What should these be? Should the Canadian industry pursue the integrated structures that are currently re-shaping the U.S.

industry? On the other hand, are there lessons to be learned from the European cooperative structures characteristic of the Netherlands and Denmark that have had so much success over the past 50 years? Or are there new emerging collaborative structures such as value chains that provide another organizational option? This paper addresses these questions by examining the strengths and weakness of each of the aforementioned structures and concludes by providing recommendations that address the growth challenges facing the Canadian pork industry. It dwells mostly on the U.S integrated model, which is perhaps the most familiar and seemingly most relevant option.

## ■ History – What can be learned?

The question of appropriate business structures and growth models provides cause for a momentary reflection on history. Clearly change is continuous. But what does history teach us? A cursory review of the European experience illustrates that over the past 500 years, no fewer than eight great powers have experienced the proverbial 'rise and fall'. (Spain, France, Prussia, Austro-Hungarian, England, Germany (twice), and the U.S.S.R). In the meantime the 'new world' arose to prominence and within a period of 100 years, the USA became an economic and military power unequalled in human history. Similarly, a scan of the corporate world indicates that very few companies listed on public exchanges exceed 50 years of age. And something well known among the farm community, family businesses rarely survive more than two generations.

Two essential conclusions can be drawn:

- Growth in all cases is the result of a unique set of political, economic and social conditions – conditions that continually change; and
- The factors that contribute to successful growth will ultimately cause the organization to fail, if it does not adapt.

The challenge for survival therefore becomes one of understanding the change drivers and continuously making the necessary adjustments.

## ■ Organizational Models

### The US Integration Model

Over the past 20 years, the US pork industry has experienced a dramatic restructuring. Most of this change has been led by the emergence, and now dominance, of large scale integrated pork production systems. Indeed the

changes have transformed the US into becoming one of the most competitive pork industries in the world. The observation that US pork exports have increased for 15 consecutive years is testimony to this competitive position.

Currently four corporations account for 65% of total slaughter capacity. Furthermore, the processing sector accounts for 25% of the entire US production base. Overall, 30 corporations account for nearly 50% of all production. Meanwhile the traditional small-scale family hog farm is nearing extinction (Informa, 2004).

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The rapid rise of the US integrated model is a manifestation of the substantive efficiencies that can be realized through increased scale coupled with the implementation of advanced management and production systems. Efficiencies are captured on several fronts including:

- Economics of scale in the purchasing of inputs – namely feed, breeding stock and animal health services and supplies.
- The ability to attract highly qualified management and technical staff.
- The capacity to supply large scale flows of uniform production that match processing plant shift requirements. This provides market power, and places the integrated operation in a much more favorable position when contracting with processors.
- The ability to capture the total margin through the entire production and processing phases

Indeed, the integrated model lends itself to a series of progressive expansion steps in terms of increasing sow herd size:

- A 3,000-sow herd enables the delivery of 1 truckload of finished pigs to the processor each day;
- A 9,000-sow herd warrants the establishment of a 100,000 ton per year feed mill;
- A 50,000-sow herd enables the operation to establish major long term supply contracts;
- The 200,000-sow herd is sufficient to supply an entire packing plant operating two shifts per day.

Each step represents another set of opportunities to reduce costs and/or improve market position.

The integrated model is characterized by a singularity of objectives executed by a focused management structure that employs effective command and

control systems: in essence – a small group of decision makers responsible for the large scale business enterprise. Thus the integrated operation is able to move very quickly. Further, the integrator has the ability to attract outside investment (both equity and debt) due to the attractiveness of the potential returns. Finally, the model by virtue of its size and attractive economic benefits for a rural community is able to exact considerable political influence at the State and local government level – a feature that has the potential to generate both positive and negative consequences.

Arguably, one would expect integrated hog operations to be located in close proximity to where feed (the largest input factor) is produced. In fact this has not occurred and the actual geography of US pig production is perhaps the model's most surprising feature. Witness the rapid rise of a massive industry in North Carolina and more recently Oklahoma – both States with little or no history in either hog or feed grain production. In effect, the natural disadvantages have been overcome by the inherent efficiencies described earlier. A recent analysis of the US pork industry (Informa, 2004) makes a most interesting observation. To quote:

*The behavior of key firms and state legislation have been more important than natural resources (or natural advantage) in determining whether a regional industry will expand or contract.*

Thus the integrated model's greatest strength is perhaps its greatest weakness – namely its reliance on political benevolence for location and continuance. However the sheer scale of these operations and growing public discourse is generating much concern regarding the management of manure, the impacts to air and water, as well as the long term well being of local workers and the community itself. The literature abounds with such concerns as demonstrated by a recent paper (Ikerd, 2003), which identifies 10 reasons why rural communities need to be concerned about large-scale hog operations. These are:

- Hogs Stink.
- The work is not healthy for people.
- Piling up too much stuff in one place causes problems.
- Consumers have little if anything to gain.
- Continuing regulatory problems are inevitable.
- Hog factories destroy public confidence in agriculture.
- The future of the community is turned over to outside interests.

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- The decision making process can rip communities apart.
- Hog factories degrade the productive capacities of rural people.
- Tomorrow's problems are disguised as today's solutions.

Many of these arguments are familiar to the Canadian hog industry. However, it is critical to point out that the economics and politics that have to date favored the integrated model are in a state of change. Firstly, economics are increasingly moving toward a 'total systems' approach which addresses both direct and indirect cost factors; secondly, the political climate is changing in response to two fundamentally opposing dynamics – namely the declining influence of the farm lobby versus the rising influence of the environmental sustainability agenda. Politics is all about people. As positions change, so to will conditions that have facilitated and enabled the operation of the integrated model.

## **The European Cooperative Model**

Much has been said about the success of the Danish and Dutch pork industries. In both cases, co-operative structures have been the prevailing organizational model and while these continue to evolve and acquire more 'corporate' characteristics, the prevailing ethos and values underlying their success, persist.

Cultural and historical context is critical to understanding the success of the Dutch cooperative. This can be attributed to two main features: first, a rural society built on the basis of small land owners and free peasants, in contrast to most of Europe which operated under a feudal land ownership system. (This is due simply in view of the reality that much of the land was too marshy, subject to flooding and as such held little attraction to feudal landlords). Second, the challenge of flooding - the result of rivers draining central Europe overflowing onto the Dutch countryside, excess rain and of course, the sea itself. Thus the development of the now legendary diking and canal systems. Significantly, the absence of a dominant nobility, stimulated a cooperative response - the people themselves banded together to build, maintain and expand these water management systems (Lavelle, 1998). Since floods spared no one, everyone had a stake. Everyone made a contribution. The result - the formation of a deep cooperative consciousness that underpins Dutch society and continues to be expressed within rural communities and agri-business organizations.

The cooperative is inherently egalitarian in nature and embodies a shared vision for the greater good of all participants. Thus the interests of many are to be represented - this is the prevailing imperative that guides both directors and managers. In essence, (and in contrast to the integrated structure) – the cooperative exists for the benefit of all and is managed on behalf of all. To this

end, the co-operative board represents the members. This sole feature is both its greatest strength and its greatest weakness. On one hand, the cooperative is able to actualize a shared purpose with benefits accruing to all participants. On the other hand the membership structure carries inherent limitations. Two are apparent: (1) difficulty in adjusting to rapid change; and (2) the ability to attract investment capital. Both these points are addressed in the ensuing discussion.

Cooperatives function best when organized around a singularity of purpose in a stable market environment – such as the marketing of a ‘pooled’ commodity; or the large-scale procurement of commodity inputs. However rapid market change is often neither foreseen nor well understood. This is largely a reflection of a homogeneous board structure – namely producer directors with a similar experiential base and a production (supply) bias. The dynamic is further exacerbated by a management cadre that is often similar in character and beholden to director wishes. Today’s rapidly changing environment requires a considerably more robust and diverse range of experience than many cooperatives may have. With regards to the issue of investment capital, the cooperative structure is well suited to the distribution of retained earnings; however, it is not particularly well positioned to raise the large amounts of capital required to make the investments necessary to remain competitive with corporations operating in the same market domain. This reason alone is why numerous cooperatives have moved to the corporate structure in recent years.

In summary, the cooperative model has considerable appeal in terms of sharing benefits among a large number of smaller scale producers. The structure also has appeal as a tool to maintain rural communities. However, its ability to operate in a fast paced rapidly changing business environment has become increasingly suspect.

## **The Emerging Collaborative Model**

The collaborative model is best known as value chains or supply chain alliances. Over the past 15 years, this organizational form has developed in the United Kingdom, and Western Europe but remains in an emerging stage within North America. Perhaps the most significant developments have been driven by UK supermarkets (led by Tesco and Sainsbury) that compete on the basis of private label product lines. These are supplied by dedicated procurement operations who have in turn established long term relationships with ‘groups’ of producers. Another good example is the Label Rouge program in France. The program which features a ‘free range’ poultry product was launched almost 40 years ago and now accounts for almost 50% of total market share within the poultry meat category. Label Rouge has recently been extended to include a pork line of products which feature distinct genetic lines, defined feed, housing, transportation and processing protocols.

The value chain is defined as a strategic collaboration of organizations for the purpose of meeting specific market objectives over the long term for the mutual benefit of all participants (Toma & Bouma, 1998). In its simplest form, the value chain comprises a retailer, a processor and producers – all owned independently but operating interdependently within an agreed management and operating framework and a spirit of mutual support. In the case of Label Rouge pork program, value chains are distinctly regional in nature – typically they comprise a regional processor, a dedicated local feed company and a number of small producers each producing stock from a common genetic base.

Ideally, value chains combine the best features of both integrated structures and cooperatives. In this regard, the value chain bridges the total system (like the integrator) but does not require one entity to source the necessary capital requirements or deal with the single site livestock concentrations that are becoming increasingly problematic. At the same time, the chain is able to distribute benefits across the participants in a manner similar to the cooperative. However, the practical realities of developing value chains in industry is much more challenging. The barriers are manifold: few retailers or processors in North America have adopted value chains – largely due to their supply requirements. Simply put, few if any production-processing systems are of sufficient scale to meet the daily requirements of their major retail customers. Hence the status quo. Furthermore, the collaborative management style runs counter to the prevailing commodity marketing ethos –

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namely profit maximization by the individual firm. Coupled with a long history of confrontation between retailers and processors, and in turn processors with producers, the climate of trust to build collaborative relationships is lacking or easily breached. As a consequence, value chains have to date been largely limited to small scale niche opportunities.

## ■ Looking at the Future

If one accepts the lessons of history presented earlier in this paper, what then become the criteria by which organizational strategies can be evaluated? There is only one approach – that is to identify the emerging drivers and respond in the most appropriate manner both organizationally and operationally.

Predicting the future is a highly speculative enterprise. It combines experience, judgment, and a modicum of luck topped with a mix of the

unexpected. Yet it is a necessary part of strategic planning and the following are some of key drivers that appear highly certain:

### ***Sustainability***

Sustainability is an increasingly important and multi-dimensional factor. As resources become scarce, it is our view that the market will gravitate to products and services that demonstrate sustainability on several fronts, including environmental (the long term well being of the required land, water and air resources), social (the well being of customers, employees and suppliers) and financial (the long term well being of owners and investors).

### ***Redefined Economics***

To date, prices and costs have been measured by short term and direct cost factors. This will change. Increasingly, it will be more difficult for the individual firm to hide indirect costs such as environmental degradation and employee health and/or injury.

### ***Declining Agricultural Political Influence***

Currently the agricultural community enjoys a level of public and political support far beyond the proportion of the population it represents. This too will change in response to two factors: (1) growing consumer awareness of the industrialization of agriculture; and (2) public indifference at best and antagonism at worst to taxpayer support of agriculture.

### ***An Increasingly 'Qualitative' Marketplace***

The market for food will be increasingly defined by a growing list of qualitative parameters – origin; drug-free; natural; animal welfare rated; environmentally friendly; quality controlled, etc. In effect, the fresh and processed meat markets will behave more as competition between branded products and less as a commodity.

## **■ Implications for the Canadian Pork Industry**

History teaches us a most important lesson: "Success ultimately sows the seeds of failure." Indeed if we build on our earlier adage that the very strengths that contribute to success will cause us to fail, if we do not change, how then can we address the changes and opportunities facing the Canadian pork industry?

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It is perhaps appropriate to conclude that a review of the major organizational structures, calls for the most 'Canadian' of approaches – namely taking the best of the U.S. and Europe and responding with a uniquely Canadian solution. Clearly, there is much to be gained by adopting the efficiencies and the systems approach of the U.S. integrated model. Yet it would be unwise to pursue this approach in an unfettered manner knowing the risks associated with degrading the environment and/or the local community. Alternatively, the ideological pursuit of cooperative structures will lead to inevitable operational and growth constraints. Nevertheless there is appeal to such structures particularly if they are able to move toward sincere forms of collaboration that enables the distribution of margins across the entire chain. Furthermore the collaborative approach is more inclined to support the distribution of uniform production systems across a larger number of farming operations, hence reducing the risks associated with mega scale production units.

The Canadian pork industry has the opportunity to take the next step forward in terms of organizational advancement that is required to ensure the long term well being of all participants. Two key factors are required:

- **Critical mass** –the establishment of a collaborative production base capable of supply large quantities of uniform high quality hogs on a continuous basis; and
- **Balance of power** –a processor with the vision to move beyond traditional procurement practices.

It is clear however that without the diligent application of proactive sustainability principles, coupled with a commitment to create value with the customer, no organizational system can expect to be successful over the long term.

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