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The Alberta hog industry problem of the 1960s: its definition and resolution

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ABSTRACT

Hawkins, M.H. and Lerohl, M.L., 1991. The Alberta hog industry problem of the 1960's: its definition and resolution. *Agric. Econ.*, 5: 211–222.

The hog industry in Western Canada in 1960s was in a state of turmoil associated with a vague, poorly understood production and marketing problem. Hog production was largely a supplementary farm activity producing an overfat product increasingly shunned by consumers. The structure, and also probably the existence, of the industry was in question. During the following 20 years, the industry changed fundamentally as various groups achieved a better definition and understanding of the problem. A reshaping of the industry was carried out by farmers, the Provincial Government, and a variety of agricultural professionals concerned with industry structure, emerging pork markets, physical characteristics of the product, and creation of a policy environment that provided incentives for output and productivity growth. The outcome has been the development of a viable pork industry in the Province (in spite of some past and continuing hindrances to industry growth) that has substantially solved the problem.

INTRODUCTION

This article presents an historical review of a relatively unplanned and unorchestrated informal process that solved a major problem facing the Alberta hog industry in the early 1960s. The problem was resolved partly through foresight and effort and partly by chance. The history of this effort provides useful insights into the process of solving a problem that went far beyond economics. The process involved a cooperative effort emphasizing market growth and industry productivity by farmers, governmental officials, and agricultural professionals.

The problem in the 1960s was that of a dormant or declining hog industry in the Province of Alberta. The situation was aggravated by production of an overfat product, a view of hog production and marketing as a supplemental farm activity, and complacency about changes in markets and produc-

tion/processing technology. In addition, Canadian grains policy was directed towards maximizing feed grain exports, and U.S. agricultural policy appeared to foster livestock production through abundant and low-cost feed grain inputs for hog production. The problem was a complex one, initially poorly understood and defined. At issue was the structure, if not the existence, of a hog industry in Alberta. The solution, though not explicitly expressed and understood at the time, was found in the development of a commercial production and marketing system for pork that would permit the growth and development of profitable red meat production in the Province.

MARKET STRUCTURE BACKGROUND

Alberta hog producers faced a highly concentrated processing and retail sector. Four firms controlled in excess of 90% of sales in both the processing and retail sectors. The impact of this structure upon market conduct and performance in the Alberta pork markets is documented and a brief review follows.

During the 1960s, the hog industry was concerned about the pricing procedure used for market hogs. Before 1969, the 'base price' for all hogs sold in Alberta was established by the hogs sold at terminal markets through public auction. However, improved provincial transportation systems and direct marketing to meat packers led to a diminished role for terminal markets. By 1968, 12% of Alberta's market hogs were passing through handlers at terminal yards, and less than 3% were sold by auction to Alberta buyers. As a result, over 97% of Alberta's slaughter hogs were sold through limited negotiation or on a non-competitive basis (Manning, 1967).

In the early 1960's, producers and producer organizations began to direct attention to a pricing and marketing system. Farmer representatives through the Alberta Federation of Agriculture (AFA) and the Farmers Union of Alberta (FUA) submitted a plan for a hog-marketing board to the Alberta Government in 1962. Action was delayed pending results of a plebiscite concerning a similar marketing structure in the neighboring Province of Saskatchewan. Although the Saskatchewan proposal was rejected by producers, Alberta organizations continued to pursue the development of a marketing board.

Progress was again delayed until the *Marketing of Agricultural Product Act* was revised by the Alberta Legislature in 1965. As a result of a revised *Act*, members of the Alberta Agricultural Products Marketing Council were appointed in July of that year. Shortly thereafter, the Alberta Swine Council presented a plan to the Marketing Council for a commission authorized to make an assessment (charge) on all hogs marketed in the province. The

objectives of the commission included financing product promotion and research into production and marketing. Within a week a farmer-owned commission agent, the Alberta Livestock Co-operative (ALC), submitted a plan for a commission to sell hogs through a teletype system on a voluntary basis. In August 1965, the FUA requested a plebiscite for its 1962 hog-marketing board proposal. Consequently, the Marketing Council urged these and other farm and swine organizations to co-operate in designing a consolidated plan which would be acceptable to a majority of hog producers. After considerable debate and two referenda, the Alberta Hog Producers Marketing Board (AHB) became a reality in the spring of 1968 (Hawkins and Higginson, 1986). The AHB was empowered to sell all market hogs in the Province of Alberta through a central selling mechanism (initially an auction system was used for each lot of hogs), and collect a levy which would be used to defray those costs and to finance product promotion and research into production, health, marketing and related issues.

MARKET CONDUCT OBSERVATIONS AND ALLEGATIONS

The packing industry in Alberta has historically exhibited interdependent market conduct. There have been indications of market sharing by Alberta pork-processing plants. For example, the four major packing plants had fairly constant market shares in 1972, 1974 and 1976 while the total volume of hogs purchased by each individual firm during the 3 years varied substantially. Price leadership has been another type of conduct displayed by the packing industry in Alberta. During two and a half months in 1980, two packers were consistently the highest bidders while two other packers were consistently the lowest bidders. This type of bidding pattern could be expected to emerge in an oligopsonistic situation. There have also been indications that cost-plus-markup pricing has been practiced. Wholesale margins were larger in Alberta than in the (U.S.) Pacific Northwest and in Central Canada (Reschenthaler, 1980).

These concerns led to an industry inquiry into hog pricing and related issues. The Alberta Hog Marketing Review Committee (Foster, 1981) alleged that short-run price fixing and collusion had occurred in the pork packing plant industry. This allegation was based on instances in which consecutive hog sales had been acquired for the same price in Alberta while prices fluctuated in Ontario during the same time period, with a similar sales mechanism. In addition, there were allegations concerning fairness in use of the teletype auction mechanism by the major packers in Alberta.

In addition to the above structure and conduct issues, the hog producer faced regular, often dramatic price and income cycles in hogs and feed grains. In response to this combination of industry structure and market

forces, the market turned inward and presented producers with a system which was operationally efficient in order to minimize downstream costs.

FEED GRAINS POLICY 1940–89

The hog industry in Alberta is and has been based on local production of barley and, to a lesser extent, other small grains.¹ Since 1942, the Canadian Wheat Board has been involved, in varying degrees, in the marketing of barley and oats. Attempts at price control eventually led to centralized control of commercial movement in March of 1947. Later that year the Canadian Wheat Board Act was amended to allow the Canadian Wheat Board (the Board) to establish quotas for the delivery of wheat, oats, barley, rye and flaxseed and to control interprovincial movement of wheat products. In 1949, the Board initiated the interprovincial and export market of oats and barley as part of its normal operations. This extension of the powers of the Board included control of all sales of oats and barley excepting farm-to-farm sales, and was made possible by the proclamation of provincial legislation for centralized intraprovincial control of feed grains marketing as well. An amendment to the Canadian Wheat Board Act in 1950 extended the definition of “works for the general advantage of Canada” to include feed mills and feed warehouses in addition to elevators. The feed mills specified in a schedule contained in the amendments were designated as agents of the Board who were required to trade only in board grains. This later proved to be unworkable and in 1960 feed mills were again allowed to trade in non-Board grains. Under agreement with the Board, the mills were required to:

- (1) Purchase grain only from permit holders.
- (2) Record the volume of grain purchased from permit holders approximately in the permit book.
- (3) Sell grain purchased from permit holders only in processed form and within the province in which the mill is located.
- (4) Post the prices paid to producers by the mills on a continuous basis.
- (5) Submit a record of purchases of all grains to the Board. Separate accounts must be kept for grains shipped out to the province in which the mill is located. This grain must be handled as an agent of the Board.

Only a small proportion of feed grains were traded through licensed mills. The remainder were traded in farm-to-farm and farm-to-feedlot transactions. The Board further required that grain not be transported across provincial borders and legally enforced this regulation (Bailey et al., 1971).

¹ Corn (maize) remains a minor feedgrain, with production less than 1% of barley output.

Trade in non-Board grains was legally permissible between farms, within a province. However, the market met few criteria of efficiency. No reliable price information existed for the various feed grains, nor was there any means of identifying local buyers and sellers other than by personal communication.

In addition to the lack of inter-provincial mobility in feed grain distribution, hog producers faced feed grain prices which reflected government transportation subsidies for export grain, and Canadian Wheat Board efforts to maximize export sales. These activities effectively raised input costs for the Alberta hog producer significantly above those of his U.S. counterpart. In the face of protests by Alberta livestock producers and Saskatchewan feed grain growers, restrictions on interprovincial movements of feed grains were lifted in the early 1970s.

Through the 1980's, the Canadian Wheat Board (CWB) began to use contracts to fulfil export market commitments for grain. Added contracting has been suggested as a means for the Board to guarantee export sales. Livestock feeders and their representatives have expressed concern that such arrangements have the further potential to distort the supply equation for hog producers.

In addition to the above sales maximization procedures, there are three programs which have affected and continue to impact, the supply of feed grains to Alberta hog producers:

- (1) CWB licensing and restriction of feed grain imports.
- (2) Canadian Livestock Feed Board subsidies on grain movements to grain producing deficit areas within Canada.
- (3) Western Grain Transportation Act (WGTA) subsidies to Canadian railways in return for rate abatement on shipment of export grains to ports.

On the positive side of the subsidy equation, the livestock producer in Alberta has seen the introduction of a 'Crow Benefit Offset' program. Related to feed grain prices, it is the remedy which the Alberta government has developed in order to partially offset the higher feedgrain prices which arise from the WGTA. ²

As they view it, hog producers have faced a stagnant domestic demand for pork, overpriced feed grains, and a marketing situation in which processing has been chaotic or nearly so. Nevertheless, the industry has grown, with annual rates of increased output of 5.5% since the mid-70s, and considerable re-structuring in terms of farm production, processing and

² The anomaly of a public program to partially offset the effects of another public program is not lost. It does, however, suggest growing recognition of the economic impacts of regulation, and of the political durability of this particular regulatory activity.

markets. The major change in the latter has been the capacity, in spite of the difficulties indicated, to increasingly serve export markets in the northwest U.S.

A STRATEGIC PLAN FOR DEVELOPMENT

After 30 years of active participation and observation, it is possible to see a master plan, even if the strategic plan was hazy. Strategic plans must have definite goals and a well funded mechanism for initiating the planning process. These goals and planning vehicles are usually forged together in the political process.

The vehicle upon which political activity and change was centered, was the (producer-elected) Alberta Hog Producers Marketing Board which was initiated in 1969. Closely following this activity was the arrival on the scene in 1971 of an Alberta government agenda of production and market expansion.

Strategic marketing plans and their implementation need a well defined product or products and a core of dedicated messengers. The product became lean pork, and the messengers became extension workers in the provincial, university and federal services. These individuals were from several disciplines, in animal and meat science with their allied agrologists, and accompanying production and marketing economists. The message being distributed was clear and the goal distinct: Develop a marketing system that promotes a lean meat type hog, that is produced and marketed in an operationally efficient manner, and one in which the price for hogs is more efficiently discovered. At the same time, maintain individual freedom for the producer to organize his production unit in the manner that he desires. Once committed to this objective, the political forces in Alberta swung their weight towards the priority of reforms of feed grain policies. Their attention thus focussed, unrestricted inter-province movements of feed grains became a reality and hog price and income stabilization schemes came into reality.

It should be acknowledged that one leading mechanism existed upon which pricing and operational efficiency improvements were based. An effective carcass or grade classification grid had a key role in developing direction for an efficient marketing system. Economists in general have tended to ignore and/or downplay the potential of introducing a straightforward classification scheme into a development situation. The impact has not, however, been ignored by physical scientists and agricultural producers who have had many skirmishes in its regard. In summary, little progress toward an expanded role for pork in Canadian agricultural exports would have been possible without the work of animal and meat scientists who

prepared a classification arrangement which rewarded the production of lean pork carcass and penalized undesirable attributes in pork.

ALBERTA PORK PRODUCERS' MARKETING BOARD – ASSESSMENT OF IMPACT

Market information

Prior to the inception of the AHB (now the Alberta Pork Producers' Marketing Board), the main sources of market information for producers were government reports, stockyards, packers, truckers, newspapers, and radio. This market information was often inaccurate, misleading, delayed, and not widely distributed among producers. Information on current market conditions was limited to activities on the terminal markets, which represented less than 5% of the hogs marketed in Alberta. Price information was not disseminated by other market agents, who accounted for the majority of hogs sold. Forecasts provided by the federal government were limited to the percentage change in farrowing and expected hog marketings. Hog price forecasting, which could be more usable and clearly understood by hog producers, was not available before the formation of the board.

The system of marketing slaughter hogs, which the Board was established to implement, applied to all slaughter hogs marketed in Alberta and thus has led to public availability of data on price and quantities marketed. The Board thus provided the organizational structure for developing improvements in the dissemination of market information. In 1972, the *Alberta Hog Journal* (the *Western Hog Journal* after 1979) commenced quarterly publication, providing information on hog market outlooks and price forecasts. It included regular summaries of retail and wholesale pork prices in an attempt to supplement producers' understanding of price relationships between provinces and levels of marketing. Market information in the form of a weekly newsletter was also distributed by the board to producers. This newsletter provided daily prices and volumes of the major hog markets in Canada and the United States for the previous week. Since June, 1978, another major source of market information provided by the board has been the daily toll-free telephone service. This system has allowed producers, assemblers, truckers and other interested parties in Alberta the opportunity to obtain current market information concerning prices in the major Canadian and U.S. markets. To provide an atmosphere for a strong communications network, each of the board's nine districts in Alberta elects a director and five delegates.

Marketing costs and operational efficiency

Various actions and policy changes of the Board appear to have reduced some components of marketing costs associated with different sectors of the

pork industry and thus have increased the operational efficiency of hog marketing. The Producers' Hog Indemnity Fund started by the board in 1973 replaced the transit insurance on slaughter hogs previously provided by private insurance companies. In 1980, the insurance costs through the producer's Hog Indemnity Fund were 19 cents per hog, while commercial insurance costs ranged from 32 cents to one dollar per hog, depending upon the transportation distance. This program also involved an ongoing hog death loss prevention program. The level of hog losses has averaged 1.74 per thousand head per year since 1974, which is low compared to other areas in Canada.

In 1975 the board began operating marketing yard terminals at six locations in Alberta. The board's assembly yard system has helped reduce assembly costs through economies of size and by using assembly yards adapted to handling hogs only. When expressed in 1971 dollars, assembly costs decreased from 45 cents per hog in 1971 to 29 cents per hog in 1979.

Income from the 'check float mechanism' was a source of revenue to the packing plants before the board's inception, but this now accrues to the board. In 1979, interest accruing to the board approached \$500,000. This money, mainly generated through the check float mechanism, was used to help cover administrative costs. This is an indirect benefit to the producers since their marketing levies are probably slightly reduced as a result of the additional revenue.

The board's data processing department provides various services and statistical information which were previously provided by government or by the packing plants. These functions are performed by the board as an uncharged service to other sectors of the pork industry and not necessarily a cost saving resulting from the board. However, when the board, rather than individual packing plants, performs these services³, economies of scale and technological efficiencies are created, thus benefiting the entire pork industry.

Carcass and owner identification are necessary to ensure efficient movement and identification of hogs and proper settlement to the producer. A program, started in 1973, involved the registration of tattoo machines and the provision of plastic identification cards for producers. The program informs producers of the importance and proper methods of tattooing carcasses, and supervises the actual identification process.

³ Briefly, these services are preparation of hog cost analysis, invoices, payment of trucking and assembly costs, and provision of statistical data for the Canadian and Alberta Governments.

PRICING EFFICIENCY FOR HOGS

One of the main functions of an efficient market is to facilitate the flow of information. The prices resulting from this flow should accurately represent the supply and demand situation. Efficient prices should provide signals about resource scarcity and reflect consumer preferences.

There has been considerable concern in Alberta over hog prices. In 1969, the AHB was established, partly in response to the concern that prices were being influenced by the noncompetitive nature of the meat packing industry in the province. Throughout the 1970s and early 1980s, the AHB has implemented several structural and policy changes to the hog marketing system, in an attempt to improve pricing efficiency. However, the question remains whether these changes have resulted in an improvement in pricing efficiency. For various reasons, it appears that hog markets in Canada and in the United States have become more isolated in the past 10 years. Some evidence has been presented which correlates localized bidding markets with an increase in market isolation. Due to the small number of packer-buyers, the AHB has moved toward a negotiated bid scheme or a bid/acceptance local marketing system. This, in turn, has been associated with weaker links between the prices in Alberta and those elsewhere in Canada or in the U.S. markets. There is no question that there are other variables which affect the pricing efficiency between and within these markets. These include regional shifts in production, subsidy programs and major deals with foreign buyers. Nevertheless, analysis has shown that an isolation of markets has occurred (Adamowicz et al., 1984) corresponding at least in part with changes in marketing techniques.

RESULTS

Pork output in Alberta has expanded considerably. Alberta pork exports to the U.S. have increased 6 to 7 times since 1977. Hog exports (almost solely to the U.S.) account for about 30% of Alberta's pork production.⁴ Hog population in Alberta has risen from an average monthly inventory of approximately 1,000,000 in 1977 to 1.7 million in 1988 (Fig. 1). These are impressive figures, particularly when linked with the variability of hog prices which the Alberta hog producer faced during this period (Fig. 2).

Retail concentration has remained unchanged with four major retailers controlling over 90% of retail sales. There are now only two major slaughterers in Alberta, with one of them being effectively owned by the AHB. Both processors actively pursue export sales to the U.S.A.

⁴ Source: Alberta Agriculture data.

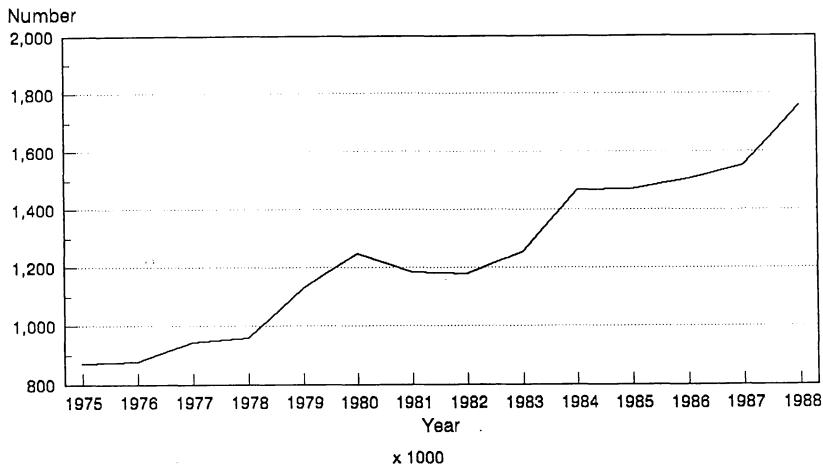


Fig. 1. Total hogs on farms, Alberta, 1 July 1975–88. Source: Alberta Agriculture, Agricultural Statistics, various years.

The Canadian Wheat Board continues to have sole authority over international trade in barley, and transportation subsidies continue to inflate local feedgrain prices. The marketing and sale of oats has been removed from Board authority, however.

The pork product improves in quality. Genetic and nutritional research, along with meat research and grading innovations, continue to produce a desirable product. The quantity and quality of hog market information have increased through actions of public bodies and through the establishment of

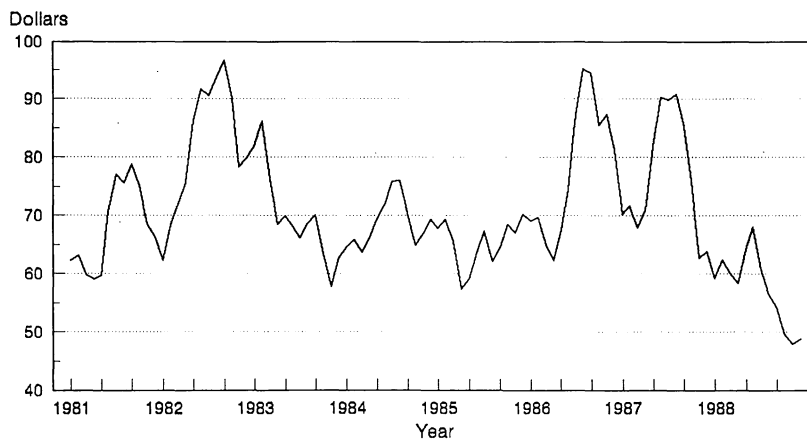


Fig. 2. Slaughter hog prices, Alberta, 1981–88 in Can. \$ per cwt (cwt, short hundredweight = 100 lb \approx 45.36 kg). Alberta Agriculture, Agricultural Statistics, various years.

AHB (later, the Alberta Pork Producers' Marketing Board). Market information and outlook analysis are more current and more widely available to producers. Producers are now able to make more accurate and timely decisions concerning the production and marketing of hogs.

The board has contributed to improvements in the operational efficiency of marketing hogs in the Province. Cost savings have been introduced through the board's establishment of the Producers' Hog Indemnity Fund and the assembly yard system. The board's sales department and data processing departments have helped increase operational efficiency through their hog allocation system, the 'check float mechanism', and the hog settlement procedure. Economies of scale are possibly created as the board, rather than each individual packing plant, prepares various government and statistical data.

The outcome has been the development of a hog industry with reasonably high levels of marketing efficiency, levels of pricing efficiency varying considerably over time, and a continuing commitment to on-farm efficiency. This has taken place within a structure in which farm production and hog processing are integrated while separating management (and to some extent ownership) of each function. The consequence is an industry, characterized by considerable decentralization in ownership, which nevertheless provides for many of the economies which could arise from integrated production and processing facilities.

CONCLUSIONS

These and a number of other features of Alberta pork production have helped re-shape an industry which, in the 1960s, seemed headed for oblivion. Two features of that change are noteworthy:

(1) A major initial task was achieving consensus about the nature of the problem. For many, the problem was first seen as discomfort: about the decline of the hog industry; about consumer resistance to the product being produced at the time; and about the structure of the packing industry. Over a period of time, the issue came to be seen increasingly in terms of product type, emerging markets, production technology and public policies which encourage change while ensuring some level of separation of producers and packers. A process, which at one time was largely concerned with division of spoils between farmers and packers, gradually became focussed on broader issues of long-run viability.

(2) The solution to this problem included those most directly concerned, primarily the farmers involved in hog production at the time. It also included the Alberta government, and it included individuals from disciplines dealing with a range of industry issues: animal nutrition and genetics;

the management of hog farms; grading and transportation of the product; market prospects; and domestic as well as international trade issues. The process was not without pain, and conflicts in short-run interests were never far from the surface. But a shared goal of growth provided an informal framework permitting integration of work by those interested in product characteristics, availability of markets, and production systems, although the disciplines involved were diverse indeed. One mechanism through which these individuals worked was problem-oriented, cross-disciplinary research on a range of industry topics.

Issues of industry structure and competitiveness are not, of course, resolved for all time. The problem of the 1960s was managed through a process of problem definition which made it possible to work toward a shared goal, and to enlist inter-institution and inter-disciplinary cooperation in resolving the issue. Continuing to define the problem in terms of output and productivity may be a basis for that cooperation to continue into the future.

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