

SESSION 1

A REVIEW OF THE CANADIAN HOG INDUSTRY

by

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It is my pleasant task to attempt to sketch for you an outline of the hog business in Canada. Of course, the total pork industry includes a number of major sectors - the producers, the feed manufacturers, the packers and the retailers. I am glad to say that over the last few years there has been a greatly improved cooperation and dialogue between these sectors.

This has been particularly so between producers and packers. A number of serious problems have been faced jointly. A complete agreement between both groups before approaching governments has demonstrated the benefits of applying a combined weight. The advantages of cooperation in certain areas of research and promotion have become obvious. Above all, there is a genuine mutual respect between the representatives of both groups and a growing realization that difficulties in one sector must be recognized by the other.

As a farmer, I naturally approach the subject from the producers' point of view. However, any realistic discussion of the production sector must also take into account the environment in which we work, both geographic and economic, the markets we serve and some of the mechanisms we use in selling and evaluating our product.

In 1971, we produced in Canada slightly over 10,000,000 hogs. This is the largest total we have ever marketed in any one year and represents a 25% increase over, say, the production for 1969.

To put these figures in perspective, our latest population figure is 22.4 million. During the 1960's, the annual per capita consumption of pork hovered around 51 or 52 lbs. In 1971, domestic disappearance jumped an astounding 16% over 1970, a year which had already shown a sharp increase.

The market price in Canada is governed largely by the North American supply and Canada's share of that supply, in round figures, is only about 10%. The tariff on the movement of fresh pork either way across the United States border has been reduced under the Kennedy round to 50¢ per 100 lbs.; no real hindrance to movement. This means that the hog supply and price in the United States directly influences the situation in Canada.

To illustrate this influence, the upswing in Canadian production in 1970 and 1971 coincided with a similar cycle in the United States and 1971 was a disastrous price year for all North American producers. Since then, U.S. production has been severely cut back while Canadian levels in early 1972 were running only 4% less than the record previous year. In spite of the maintenance of high Canadian production, we enjoyed price levels some 40% better than last year.

The inter-action between price and supply has normally resulted in a four year cycle. Super-imposed on the cycle, however, has been the effect of grain surpluses in Western Canada. Whenever severe difficulties in moving grain have arisen and the Western farmer has been left short of cash, inevitably, there has been a surge of hog production in attempts to market some proportion of the grain through livestock. Contrary to past history, present indications suggest that a substantial percentage of the latest Western surge may well be here to stay.

In addition to our domestic market, between 6 and 8 percent of a pork production moves into the export market. Most of this trade is in specialized cuts or processed products with some live hogs moving from Western Canada to the West Coast of the United States if and when price differentials are favourable. Our largest customer is the United States and, on occasion, this trade is partly balanced by a flow of fresh cuts or carcasses in the opposite direction. In off-shore trade, Japan has become an important new market which over-shadows some of our smaller but traditional exports to the Caribbean.

The considerable rise in value of the Canadian dollar vis-avis its U.S. counterpart is obviously of concern as far as exports are concerned. It can also intensify the downward pressure on Canadian domestic prices when U.S. prices fall.

Geographically, Canada is a large country, stretching some 3,000 miles from coast to coast. The bulk of the human population is unequally distributed across the nation in a comparatively narrow band immediately north of our southern border. The largest concentrations are in the East Central areas, namely the provinces of Ontario and Quebec. The main grain growing regions are Ontario in the East and the prairie provinces in the West. It is a combination of grain source and population density which has decided the distribution of hog production. The following table compares the population figures and the 1971 hog production by region.

	% of Human Population Jun 1/71	Est. Wkly Domestic Dis- appearance of Hogs pro-rated by population	Av. Wkly Marketings in Province excluding live hog exps.	Weekly surplus or deficit
<u>Western Provinces</u>				
British Columbia	10.4	18,970	3,454	-15,516
Alberta	7.5	13,680	38,135	+24,455
Saskatchewan	4.3	7,843	18,419	+10,576
Manitoba	4.6	8,390	29,908	+21,518
<u>Total West</u>	26.8	48,883	89,916	+41,033
<u>Eastern Provinces</u>				
Ontario	35.7	65,117	57,779	- 7,338
Quebec	27.9	50,890	39,510	-11,380
Maritimes	9.6	17,510	7,285	-10,225
<u>Total East</u>	73.2	133,517	104,574	-28,943
<u>Total All Canada</u>	100.0	182,400	194,490	+12,090

It will be seen that Quebec and the Maritime Provinces in the East and British Columbia in the West are all pork deficient areas. Conversely, the prairie provinces produce more than twice the requirement of pork for their own population. Ontario is the only region where a near balance between pork production and population exists. In the normal distribution pattern, Alberta supplies British Columbia and any remaining surplus quantities from that province, plus those from Saskatchewan and Manitoba, move across the country to Quebec, and beyond. With the exception of Saskatchewan, where substantial numbers of live hogs are shipped into Alberta and Manitoba, the hogs tend to be slaughtered in the province of origin and it is the processed product which moves.

Being in a northern continental climate, we experience a wide range of temperatures and a long winter. In certain areas, there can be a fluctuation of 140°F between summer highs and winter lows. Such extremes are not particularly conducive to hog production and it has meant that nearly all such production is carried out in confinement. All newer buildings are heavily insulated and mechanically ventilated. Concrete floors are almost universal. It is true that a proportion of sow herds are pastured in the summer but the tendency is strongly towards confinement year-round accommodation.

In Ontario, which is the largest hog producing region, corn plays an important role in hog feeds. With the development of new hybrid varieties, corn growing areas have spread both north and east. Increased production in counties adjacent to the east coast of Lake Huron, for example, can be directly related to the grain corn expansion in this area over the last ten years. In the rest of Canada, barley and feed wheat are the common cereals used for hog diets.

Soya bean meal is the primary ingredient used as a protein supplement. Meat meal appears in some concentrates and, to a lesser extent, fish meal is used along the East Coast. The rapid rise in acreage of rape seed in Western Canada is opening up further possibilities.

Like many other countries, Canada has seen a steady trend towards specialization in hog production. For example, in Ontario 10% of the producers now market 54% of the hogs. Even so, we have not seen the appearance of ultra-large units to compare in size with, say, the co-operative farms of Eastern Europe. The bulk of the production is still carried out by comparatively small owner-operators. Of the newer farrow-to-finish units, the average number of sows per herd is estimated at between 60 and 70. This size still permits an owner-farmer to produce and market over 1,000 pigs per annum with occasional assistance from his family. Of course, there are a fair number of operations that run up to two or three hundred sows but, in the main, that is the limit for one location.

In addition to the farrow-to-finish units, a substantial proportion of Canadian production is raised to the 40 lb. weaner stage or smaller farms and sold to purely finishing operations for the growing-out period. Those specializing in finishing tend to be larger units.

A combination of a cold climate, the comparative isolation of confined rearing the broad distribution of the industry over a vast territory and stringent import regulations all assist to limit the amount of disease in the national herd. As a result, Canadian swine are completely free from such common diseases as swine cholera, African swine fever, and hoof and mouth disease. Trichinosis, too, is virtually nonexistent. Although we experience cases of such infections as Transmissible Gastroenteritis, they do not ravage our herds to the same extent as one finds in more densely populated concentrations of hogs. We are also making good progress in the broadening of minimal-disease standards in specific herds which eliminate other of the pig-to-pig infections and, in particular, enzootic pneumonia.

Up to about twenty years ago, unlike the United States, 90% of the Canadian national herd was based on the Yorkshire breed, the remainder being examples of other British blood. The Canadian Yorkshire was undoubtedly derived from the British Large White with possible additions of Middle White. It was quite different from what we termed in those days the American lard-type hog.

Since that time, there have been introductions of Large White and Landrace from Europe, mainly via the United Kingdom.

In addition, a synthetic breed was developed at a government research farm in Western Canada under the name of Lacombe. It combined Landrace, Berkshire and Chester White. In more recent years, we have seen the utilization of the American Hampshire and the Jersey Duroc in certain aspects of cross-breeding.

It is now generally accepted in Canada that the advantages of heterosis dictate that a cross-bred sow should be used for commercial production. Yorkshire/Landrace or Yorkshire/Lacombe are the most favoured combinations because of a high fecundity. While many farmers attempt their own cross-breeding, there are also examples of large breeding structures, either private or co-operative which supply commercial breeding stock derived from crossing specific repeatable strains.

For many years, the more progressive purebred breeders have used the government-operated test stations for progeny testing. In more recent times, the stations have been available for live boar performance testing and a number of optional variations. Carcass cut-outs are measured and scored against a moving index. Even more widely used over the past five years have been the provincially operated "on the farm" weigh and probe tests with back-fat and maturity being the criteria for evaluation.

With swine breeding in the hands of a great many individuals it is not easy to detail a general breeding policy. In my own view, and in my own breeding programme, we have accepted the concept that a commercial operator should concentrate on meat production rather than attempt to be part geneticist, part breeder and part commercial producer. Once it is agreed that the commercial farmer's production is all destined for the slaughter house, then we can breed for him a specific hybrid female line

in which we heavily stress the reproduction and mothering qualities and a specific male line where all the stress is on carcass quality, feed conversion and rate of growth. Again, speaking personally, this concept has been carried to the point where, in our programme, the male line is also now a first-cross hybrid.

Rail-grading after slaughter was introduced in Canada as far back as 1926 with government personnel stationed in the packing plants to perform these duties. Classification was based on acceptable weight ranges and certain back-fat tolerances at shoulder and loin for each of three grades. Set price differentials were established between grades and a government quality premium was offered as an incentive for select carcasses. This system, with certain modifications was continued until about four years ago.

By 1965, with steadily increasing reluctance of the North American consumer to eat or even buy excessive fat on meat, there was a growing realization in Canada that the true value of a hog carcass was directly related to the number of pounds of trimmed lean meat yielded from that carcass. Certain of our scientists, strongly supported by producers, were anxious for a completely revised method of grading. After four years of extensive research and excellent co-operation between producers, packers and the federal government, a new system was implemented in January of 1969. This is a percentage price-index method with a common market price being established for the average carcass. The table is so calculated that the average carcass at each weight is given 100 index (See Appendix A).

The computation of the index starts with a formula using carcass weight and the sum of two precise back-fat measurements to predict the number of pounds of lean meat yield. It is then modified by certain corrections associated with weight and the variations in the commercial value of the specific cuts derived from that weight.

The resultant index value can be read from the table according to the weight and backfat total of any carcass. It can vary from 88 to 112 which represents a 24% potential spread in price. As the latter is keyed to the true commercial value of the carcass without any artificial loading, both producers and packers are well satisfied. It is recognized that the prediction formula is only accurate within certain tolerances, but as a predictor of lean content and commercial value it is far superior to the old A. B. C. grades.

We expect at some future date to adjust the formula by adding one further measurement through the ham or loin. This will greatly increase the accuracy but first we must find a practical method which can take the measurement from carcasses moving on the rail at speeds of 300 per hour.

The actual selling of hogs to the processors is largely handled by provincial producer-elected marketing boards. They operate with compulsory powers granted by specific legislation. In Ontario, for example, all hogs raised in the province must be sold through one of the collection centres

operated by the Marketing Board. As groups of hogs are assembled, a central sales office in Toronto is notified. The location and numbers in each group are then sent out by a teleprint communications network connected to all potential buyers and a 'Dutch' auction of descending prices commences. As soon as the price reaches a level that a buyer is willing to pay, he presses a button, and stops the auction. All buyers know the price at which the hogs have been sold but only the sales office and the actual buyer know who has made the purchase. As the pigs are subsequently rail-graded, it makes little difference that they are bought unseen.

As producers, we are satisfied that this is a fair and truly competitive method of selling. On the other hand, we are not satisfied that selling to the highest bidder, no matter how low the price, is all that there is to marketing.

In consequence, there is a great deal of consideration being given to the possibility of more sophisticated methods which incorporate something beyond mere competitive selling.

Our farmers are most independent people and unless circumstances force them to do otherwise, they prefer not to work under rigid production controls. Even so, some degree of stability in price is becoming essential and stability of supply is of equal concern to the trade.

To conclude, may I say we have confidence in our industry. We are in a position to grow abundant feed and we have the technical knowledge, not only to improve our competitive situation, but also to adjust to any change in consumer preferences. Our domestic population is expanding steadily and we shall continue to maintain and improve our share of the nation's diet. We are convinced that the next few years will see great changes in North American kitchens which will offer new opportunities. Fortunately, pork is the most versatile of all meats.

PERCENTAGE PRICE DIFFERENTIAL TABLE

BACKFAT INCHES	PREDICTED YIELD	90 124 lb.	125 129 lb.	130 139 lb.	140 149 lb.	150 159 lb.	160 169 lb.	170 180 lb.	181 195 lb.	196 lb. and Over	Ridgling
- 1.9	69.7%	87	105	109	110	112	112	112	91	85	67
2.0 - 2.1	69.0%	87	103	107	109	110	112	112	91	85	67
2.2 - 2.3	68.2%	87	102	105	107	109	110	110	91	85	67
2.4 - 2.5	67.5%	87	100	103	105	107	109	109	91	85	67
2.6 - 2.7	66.7%	87	98	102	103	105	107	107	91	85	67
2.8 - 2.9	66.0%	87	97	100	102	103	105	105	91	85	67
3.0 - 3.1	65.2%	87	95	98	100	102	103	103	91	85	67
3.2 - 3.3	64.5%	87	92	97	98	100	102	102	91	85	67
3.4 - 3.5	63.8%	87	88	95	97	98	100	100	91	85	67
3.6 - 3.7	63.0%	87	88	92	95	97	98	98	91	85	67
3.8 - 3.9	62.3%	87	88	88	92	95	97	97	91	85	67
4.0 - 4.1	61.5%	87	88	88	88	92	95	95	87	82	67
4.2 - 4.3	60.8%	87	88	88	88	88	92	92	87	82	67
4.4 - +	60.1%	87	88	88	88	88	88	88	87	82	67

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