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Accomplishments of and Opportunities for Agricultural Economists in Parastatal Organizations

I have been asked to speak to you on the role of agricultural economists in parastatal organizations. All my experience in this area has been with the Canadian Wheat Board, so that my comments will be based entirely on my involvement with that organization.

The Canadian Wheat Board, defined in Canadian legislation as a “Crown” corporation, was established by the Government of Canada in 1935 to market Western Canadian grains in an orderly manner. At present, the Board has full responsibility for marketing Western Canadian wheat, oats and barley internationally. It also has sole responsibility for marketing these grains domestically to processors for human consumption (i.e., flour mills, malting companies, etc.), and is a standby supplier of grains to livestock feeders at (US) “corn competitive” prices.

In describing the role that agricultural economists have played and can play in an organization such as the Canadian Wheat Board, special attention must be given to that word in this year’s IAAE theme “change.” For change has characterized the national and international grain marketing system and has influenced the real and perceived need for economists, since the first batch of wheat was shipped abroad from the Canadian prairies in the 1880s. A very brief history of the evolution of the Canadian and international grain marketing systems can perhaps best illustrate this. A look ahead to probable developments in grain marketing structures and systems will say much about the need for input by agricultural economists in the future.

The Western Canadian grain growing area was quickly settled during the last part of the nineteenth century by the adventurous, the dispossessed and the downtrodden from scores of European countries. These settlers, arriving in large numbers, were armed for the most part with no more than simple and crude farm implements to do battle with heavy soils and unpredictable weather. Little time passed, however, before they found themselves in a continual and losing struggle with even harsher forces – the shippers and carriers of grain. The two major railway companies, which monopolized grain movements in their separate regions, granted monopoly rights to a small number of grain handling companies

or “syndicates” as they were called at the time. Syndicate owners then met daily in Winnipeg to set country prices, so that competing on the basis of price for a farmer’s business became non-existent. Farmers’ returns per bushel therefore remained at constantly low levels, even in the face of rising world prices. Syndicate profits, conversely, were allowed to fluctuate, depending on the world price, between moderate and exorbitant levels. Agricultural economics as a separate discipline did not, of course, even exist at the time, but the grain industry moguls did make good use, or rather, misuse, of the teachings of that great *laissez-faire* theorist, Adam Smith, to justify the workings of “free enterprise”. Where farmers experienced injustice and exploitation, these corporate leaders saw immutable market forces at work, guiding the entire grains economy to its point of highest return. Instead of fostering the development of a healthy market economy, they used their market strength to meddle with market mechanisms, all the while protesting that their self-interest was allowing Smith’s famous “invisible hand” to serve the highest interests of society.

Trapped in a world of back-breaking labour, poverty and broken dreams, prairie grain farmers showed little interest in the niceties of irrelevant economic theories. Instead they began to organize, to collect strength to stand up to and against the powerful transportation and marketing interests. They established farmer-owned grain companies and succeeded in forcing the federal government to regulate the activities of the grain companies and railroads. They were thereby able to put an end to the most blatant abuses, in that period, of the grain marketing system. And yet, control of their economic destinies remained largely out of their reach, as world demand and prices continued to fluctuate capriciously and without regard for the welfare of Western Canadian farmers.

During World War I, the grain marketing situation grew increasingly chaotic as the Allied Governments demanded all the excess grain that could be produced in the Canadian West. The Government, in response, was forced to resort to the establishment of a government grain marketing board, which was later restructured as the Canadian Wheat Board. Trading in futures at the Winnipeg Grain Exchange was suspended, and concepts such as the initial payment (a guaranteed minimum price) and the pooling of farmer funds for determining final payments were introduced.

Prairie farmers, who experienced a sustained period of high prices for the first time, under a marketing system they could view as a real marketing alternative, strongly supported continuation of the Wheat Board concept. Not so the federal legislators, however, who continued to view the production and marketing of Canadian grains in a world grain marketing system as the genius of Adam Smith in action. Direct involvement by economists at the time was limited or negligible, and then mainly to prepare theoretical justification for the *status quo*. The Canadian Wheat Board was therefore disbanded in July 1920.

Crop disasters, low prices and reduced marketing opportunities by the mid 1930s, however, finally forced the Canadian Government to con-

sider radical changes in the Canadian grain marketing system. And yet, it remains ironic that passage of the Canadian Wheat Board Act in 1935 was due more, it seems, to personal differences that developed between Prime Minister Bennett and grain industry magnates, than it was to deeply felt economic principles. In any case the Canadian Wheat Board was set up with the objective of marketing "as much grain as possible, at the best price that can be obtained", and the Board has maintained responsibility for marketing the bulk of Western Canadian grain production since that time. Involvement of agricultural economists has increased only as world marketing structures, and consequently the Board's way of conducting its business, have changed.

Following the Second World War and up until the 1960s, the Canadian Wheat Board served mainly to provide initial payments to farmers, to pool funds received in addition to this for return to farmers, and to administer a quota system to bring grain into the marketing system in an orderly, programmed manner. Grain sales were made on an "in store Thunder Bay" basis, to a large number of private companies at the Wheat Board's asking price, and on the basis of international and domestic sales made by these companies to a large number of buyers in each importing nation. The Board exerted and desired little control over agency sales, by destination.

Crop failures in the early 1960s in the grain producing areas of the communist world's two giants, however, resulted in an abrupt and lasting change in the international market structure for grains, and as a result in the Canadian Wheat Board's involvement in international grain marketing. China and the Soviet Union, making all purchases through their central purchasing agencies, and dealing with all terms of trade, had no desire to arrange for imports of Canadian grains through middlemen. Instead they circumvented the Board's agency system and dealt directly with the Board on all terms of trade, including quantity, grade, shipping periods, port areas, prices, credit arrangements (if any), currencies to be used, and the host of other issues which must be negotiated in international transactions. The Board took the position then, which it has maintained to the present, that it will deal with grain buyers on the basis in which they wish to make their purchase of Canadian grains. As other communist countries came to the international market for grain therefore, Canadian Wheat Board involvement in negotiating contracts directly with foreign grain buyers increased.

But it was not only the presence of communist buyers that increased Board involvement in the international wheat market. Developing countries also became major actors in this area. Countries that had in the past been normally self-sufficient or even occasional exporters found that the productivity of their lands could not keep pace with rapid population growth, so they looked to world grain exporters to supply them with their deficit requirements. Most of these countries, having little or no tradition in grain buying and therefore no established trade, opted to establish government grain import agencies. Governments in most of these coun-

tries reasoned that their agencies would be able to provide longer term food security and greater bargaining power *vis-à-vis* exporters, than would the establishment of smaller and competing private import houses. Again in their dealings with Canada, the preference of the import agencies, on the whole, has been to negotiate all terms of trade directly with the Canadian Wheat Board. Purchases made by developing nations, incidentally, now account for over 50 per cent of the world wheat total.

Conditions have not remained static in the so-called open market economies either, as buying, which in most nations in the recent past was in the hands of a large number of firms, has become concentrated in the hands of a very small number. In Western Europe, for example, over 90 per cent of all wheat purchases made by our largest wheat customer on that continent, the United Kingdom, is now made by two firms. Foreign purchases of Canadian durum wheat for the 15 large semolina mills in Italy are made by one firm in Naples. The bulk of our barley sales to Italy are negotiated between the Wheat Board and one major buyer. Similarly, purchases of wheat and barley by Japan are made on a weekly tender basis by the Japanese Food Agency, which is part of that country's Department of Agriculture. In a relatively short period of time, therefore, the share of sales negotiated by the Wheat Board directly has increased from zero to over 80 per cent.

Concurrently, during this period of rapid structural change, the volume of world trade has grown substantially. The wheat trade has doubled over the past twenty years to a level in excess of 70 million tonnes, and the coarse grain trade has quadrupled, to over 80 million tonnes per annum at present.

Obviously, in the face of all this change and growth, a continuing level of high marketing performance has required a much higher level of technical and managerial expertise and training. In the last couple of decades therefore, agricultural economists have been taken on staff for the first time and have directly influenced the actual operations and policy decisions of the Canadian Wheat Board.

There is a great deal in an agricultural economist's training that will allow him to make valuable contributions to the efficient operation of a parastatal organization, and I will list some of them with specific reference to the Canadian Wheat Board. But I should also point out that to be effective, an agricultural economist must first secure rather extensive experience in the grains industry. Academics, for example, who have no practical experience in grain marketing often seem to reach invalid conclusions even with their highly honed academic tools, because they do not properly understand the nature of the product or the nature of competition in the industry. They assume, for example, homogeneity of a product such as wheat, when in fact wheat has many different end uses, all requiring different quality characteristics. They often ignore or downplay the psychological and political factors which can strongly influence price and purchasing decisions in a large number of countries; and conversely, they often overestimate the value of their econometric applications. Also,

economists generally assume a competitive free trade international grain market, in which producers and consumers in all trading nations respond to international price movements. But that is in fact not at all descriptive of the international grain trade. I will say more on that later.

In an analytical sense, agricultural economists at the Wheat Board have engaged themselves in a very large and varied number of activities and project, including

pricing and marketing strategies to maximize farmers' returns. How much, for example, of which grains should be sold and to which individual markets? When should sales be timed and when should contracts be priced? How closely should the Board follow price movements in the US commodity markets? Are movements in these markets real or are they short term fluctuations not related to underlying market forces? What is happening to exchange rates, and what does that mean for Board pricing?

comparative economic systems. The United States is the dominant participant and the price leader in the world grain trade. An understanding of the American pricing system is therefore essential. Also of great importance is a good understanding of the planning systems of those major importing countries with communist governments. A firm grasp of the European Community's Common Agricultural Policy similarly is essential.

market analysis. The need for accurate and ongoing assessments of individual markets has increased greatly as the Board has become more directly involved in grain sales. A high level of expertise has therefore been developed within the Board constantly to keep abreast of changing supply and demand conditions for all grains in all major grain trading nations.

minimizing marketing costs. Board economists have participated in the development of policies to improve the efficiency and coordination of the movement of grain. This has resulted in a complete revamping of the grain logistics system, from farm level to terminal positions. The existing structure of the country elevator system, scattered as it is over very large areas, will continue to present challenges to analysts in the future.

forecasting market demand. We at the board have undertaken major studies to project world trade and the likely structure and needs of the Canadian grains industry in the long term. Our studies indicate continued growth in both the world wheat and feed grain trade. We expect, for example, to be able to export 30 million tonnes of grains and oilseeds from Canada by 1985, as compared with the 21.5 million tonne record level achieved in 1977-78. But we can accomplish this only if grain transportation and handling capacity in Western Canada is adequate to accommodate such a major increase in traffic. The Board, on the basis of these forecasts, has made proposals and provided incentives designed to encourage a significant increase in rail rolling stock and in West Coast terminal capacity. The Board has also

encouraged farmers and agricultural scientists to prepare to increase agricultural productivity on the prairies so that farmers in Western Canada can take full advantage of this growth potential.

The agricultural economist in a parastatal organization is, therefore, always conducting his analyses from the industry perspective rather than the narrower one of a competitive firm. It is not the firm's short run profit-loss statement that concerns him so much as the industry's costs-benefits. Ventures that may be uneconomic for privately-owned firms (i.e., the construction of "surge" terminal elevator facilities to handle peak grain movements and minimize demurrage claims) are promoted because of the monetary gains provided to the entire agricultural community. Also, because of its monopoly position in an industrial sector, decisions and changes introduced by parastatal organizations directly affect all components of the industry. The agricultural economist's training will normally enable him to identify the major economic implications of proposed policy changes.

On a broader basis, the agricultural economists' role in the Wheat Board has included describing the structure of the world in which grain is traded, and on this basis, making recommendations about policies to maximize Canadian grain producers' welfare. The goal of the private exporter in the industry, for example, is to maximize short term profits. Margins are normally very small, so a private firm's returns can be maximized when its volume is maximized (i.e., increasing its share of the market). The Wheat Board, as a monopoly seller of Canadian wheat, however, has an entirely different objective - to maximize total returns to Canadian grain farmers, and in a world with very inelastic demand, this can be best achieved by increasing the world price.

Furthermore, agricultural economists experienced in Wheat Board operations quickly reject the widely held assumption that the free play of supply and demand forces internationally dictates the level of world prices. The fact is that consumers in almost all importing countries do not respond to international grain price fluctuations because grain prices in importing nations are usually set well above international levels (i.e., only about 5 per cent of all wheat exported internationally goes to countries where internal price levels are allowed to fluctuate directly with international levels). So consumers in these countries are in effect isolated from international price movements. When domestic production does not meet a country's needs, it imports grain to make up the difference. A country's import demand, in other words, is to a very large degree, a function of its domestic production and supplies. Even in developing countries, the politics of food is so important that most countries will sacrifice hard earned foreign exchange holdings to avoid the politically hazardous possibility of widespread hunger. Food imports in these countries, whether under commercial or aid programmes, largely reflect production shortfalls rather than changes in aggregate demand or financial considerations.

Since grain prices in most important nations are well above and fully

insulated from exporters' selling price levels, farmers and governments in exporting countries such as Canada are in effect subsidizing grain buyers (normally governments) in grain importing countries. This has rather profound economic implications, particularly for international wheat agreements and other forms of exporter co-operation, because if this analysis is taken a step further it can be shown that international grain prices could in fact be set at much higher levels without disturbing trade levels. The level of subsidy would then simply fall. In contrast with most textbook examples of oligopolistic selling, in which price is raised above both unit and marginal costs of production, competition between exporting firms and agencies has often resulted in international grain prices at levels *below* unit and marginal costs.¹ Obviously, if exporting countries could agree on levels that would always cover production costs plus transportation and marketing costs to port areas, efficient grain producers in grain exporting nations would be justly allowed to thrive, while consumers in importing countries would have much improved year-to-year and long term supply security. Increasing world prices to such levels would reduce aggregate demand only marginally, if at all, but the transfer of income from exporters to importing countries as a result of restrictive import practices would be substantially reduced. This is the type of reaction that, in line with the theory of countervailing power, can be anticipated, for the exporting nations would be acting together to protect themselves from abuses on the import side.

In looking to the future, I would suggest that a high level of training in economics for all Wheat Board market analysts will be a vital ingredient in our continuing efforts to best serve Western Canadian grain farmers. Independent thinkers, well versed in the principles of economics, but not hidebound by the tidy models of yesteryear's sages, will hopefully be available to continue to describe and interpret the changing grain trade and to outline the implications for the Canadian grains industry. And analysts with imagination and initiative must continue to undertake economic research to develop policies and strategies that will improve the Canadian marketing system's performance.

There will always be frustration because most problems simply do not have solutions which please all grain industry participants. Also, the benefits of decisions made on the basis of economists' conclusions are almost always impossible to quantify. And yet, the grain industry is an exciting one, and is evolving at a rapid pace. Challenges continue to confront the agricultural economist at the Canadian Wheat Board as he faces a vast spectrum of issues, ranging from production and delivery problems on individual farms to commercial and political and sociological matters in a variety of foreign lands. The grain world will not get simpler, but can only become more complex as the world's population continues to increase, and as dependence on a very small number of grain exporting countries (notably in North America) grows. Greater marketing complexities will require greater imagination and freshness. Agricultural economists are well trained to provide that type of input.

NOTE

¹ It is encouraging to note that a few agricultural economists in North American universities have recently shown a willingness to grapple with some of these issues. The theory of oligopoly remains one of the least satisfying in the entire field of economics, so that a serious review of it, in particular as it applies to the international grain trade, would be welcome. Similarly, the formal general equilibrium neoclassical theory of international trade is not descriptive of the dynamics of price–quantity relationships in an oligopolistic–oligopsonistic (and highly regulated) world grain trade market and would benefit from attempts to introduce concepts of imperfect competition.

DISCUSSION OPENING – HANS G. HIRSCH

The late Henry C. Taylor, whom many of us admiringly call the father of agricultural economics, developed the case study method during his many years at Winconsin. Based on his judgement and insight – more than on statistical sampling – he created the concept of “the typical farm”.

Bjarnason, who earned his doctor’s degree at Winconsin and can thus be regarded as a Taylor disciple, has applied the case study method to “parastatal organizations”. His experience has been with the Canadian Wheat Board; so he has given us a case study of that Board.

He has not given us a definition of “parastatal organization”. The term has caused some bewilderment among some of my colleagues and bosses in Washington because we work on the principle of non-delegation of governmental regulatory functions to the private sector. By contrast, the parastatal organization, as it exists in British countries, in France, and perhaps also in some South American countries, may be regarded as a joint enterprise of the government and the private sector for some regulatory purpose. In Canada, the public and governmental nature of the marketing boards seems to predominate as against the private sector role in the parastatal organization. I invite Dr Bjarnason or some discussants to compare the Canadian Wheat Board with other marketing boards in Canada and with similar organizations in countries with British traditions, with the so-called interprofessional organizations in France, and with the Argentinian Grain Board.

The question of the representativeness of the Canadian Wheat Board for parastatal organizations as a class needed not have been raised if Dr Bjarnason had been asked to discuss the role of our profession in the Canadian Wheat Board – an assignment which would have been perfectly proper for a meeting of the IAAE in one of Canada’s leading wheat provinces.

In presenting the history of the Canadian Wheat Board, Dr Bjarnason portrays the strategy of the communist world’s two giants in their role as customers. These customers insisted on dealing directly with the Board and on avoiding the private sector grain trade. US relations with these two giants, in the absence of a National Grain Marketing Board, developed differently. In the arrangements for US grain exports to the Soviet Union, a dualism between Government and the private sector has

emerged on the US side of trading: all terms of trade are typically worked out between the Soviet purchasing agency and US private trading companies. However, the US Government acts as an overseer. The five-year US-USSR Grain Agreement, which will enter into its fourth year next month, is the instrument of this oversight. It provides in essence that the Soviet Union will buy each year a minimum of six million tons of US grains, that it may buy up to eight million tons without consulting the US Government and that it will consult with the US Government if and when it wishes to buy in excess of eight million tons. The agreement also provides for periodic consultations between the two Governments.

Dr Bjarnason goes on to remind us that grain importing LDCs have also preferred state trading on their part. We in the United States have experienced this preference also and, as in the case of the Soviet Union, we have developed a kind of a dualism between the Government and the private sector for exporting to LDCs. The Government role is often played by the Commodity Credit Corporation, which extends credit either commercially or concessionally. Dr Bjarnason completes the picture by relating how we find either state-trading or monopsony-trading in some of the large, importing, developed countries.

I was surprised to hear that agricultural economists have been taken on the Canadian Wheat Board staff *for the first time* in the last couple of decades. I thought they had been there from the beginning. It seems that Dr Bjarnason is referring to fully academically trained agricultural economists, i.e. holders of PhD degrees.

For professionals so equipped and, at the same time, well familiar with the practical and technical aspects of wheat trading, he presents a challenge to improve our insight into the workings of a highly regulated oligopolistic-oligopsonistic world grain trade market. If I understand him correctly, he wants the profession to come to grips with newly refined measures of protection which separate importer-consumers from the exporter-suppliers. He would like to see the importer-consumer's payment reach the exporter-supplier without undue diversion and he reminds us of the inelastic nature of the demand for wheat.

It would have been enlightening, in this connection, to have at least a short exploration of the experience which we have gained in the pursuit of these policies. I am referring to the World Grains Arrangement signed in mid-1967 to take effect in mid-1968. It provided for prices which, with the knowledge of hindsight, turned out to be high. These prices acted as tremendous production incentives and in Canada they ultimately led to the so-called LIFT programme – lower inventories for tomorrow by a drastic curtailment in wheat acreage.

I should like to summarize my three principal discussion points:

- (1) I am critical of the subjectivity with which Dr Bjarnason chose the Canadian Wheat Board as an organization representative of parastatal organizations in general and invite comparisons of the Canadian Wheat Board with other Canadian marketing boards and with marketing boards elsewhere during the discussion;

(2) I point out that we in the United States have developed a dualism between the Government and private trading companies in dealing with governmental customers in the communist part of the world and in the Third World; and

(3) as a cautious comment to Dr Bjarnason's postulate for higher international grain prices; I recall the production response to the relatively high prices that had been set in the International Grains Arrangement negotiated in 1967.

GENERAL DISCUSSION – RAPPORTEUR: B.L. GREENSHIELDS

It was felt that a drawback of the paper was that only the operation of the Canadian Wheat Board had been described by Harold Bjarnason and the role of agricultural economists in parastatal organizations in general was not covered. The structure of international grain markets was then discussed. It was noted that oligopoly on the sellers' side of the market fostered oligopsony on the buyers' side.

Harold Bjarnason and the discussion opener, Hans Hirsch, disagreed as to the causes of the increase in world grain production following the 1967 World Grains Arrangement. Among the causes cited were movement up the supply curve due to the increase in price, and outward shifts of the supply curve due to better-than-average weather and the introduction of high-yielding varieties.

In response to the question about how parastatal exporting organizations allocate supplies outside of the price mechanism, Harold Bjarnason replied that because of the lack of stocks and transportation system constraints, supplies were allocated first by bilateral agreements and residually by the price mechanism.

Participants in the discussion included W.E. Hamilton, Anthony E. Ikpi and Allan D. McLeod.