

ECONOMIC RESEARCH REPORT

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DEVELOPMENT OF AN INTEGRATED STRATEGY FOR RESEARCH
ON THE PROCESSING, DISTRIBUTION AND RETAILING
SECTORS OF THE CANADIAN FOOD SYSTEM

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Prepared for
Dr. G. A. Hiscocks
Senior Food Policy Advisor
Consumer and Corporate Affairs Canada

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Place du Portage
Hull, Province of Quebec

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Broadwith, Hughes & Associates Ltd.

Management and Consulting Services in Food and Agriculture
Services de gestion et de consultation en alimentation et en agriculture

Hull Office: 380 Woolwich St., Guelph, Ontario, Canada N1H 3W7 (519) 822-1000 Cable: AGMFCN-GL
Branch: 95 Berkeley St., Toronto, Ontario, Canada M5A 2W8 (416) 363-3643

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SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Why Do Research on the Processing, Distribution and Retailing Sectors?

The existence of the processing, distribution and retailing sectors of the food system is not, in itself, sufficient justification for expending funds on economic research in these sectoral areas. However, a number of substantive reasons can be cited for undertaking research, including:

(1) A number of government departments, most notably Agriculture Canada, have asserted that the P.D.R. sectors are presently operating at inadequate levels of efficiency.

(2) There is considerable evidence of an endemic lack of public confidence in the performance of the P.D.R. sectors. In addition, there are sporadic crises related to specific events, such as rapid rises in sugar prices in 1974 and 1975. More published research and better information exchange would make a substantial contribution to improving inter-sectoral relationships.

(3) About sixty per cent of the consumer's food dollar is absorbed beyond the farm gate. Hence, the performance of the P.D.R. sectors has a major influence on the welfare of both food consumers and agricultural producers.

(4) The P.D.R. sectors represent the largest component of the whole Canadian industrial sector in terms of dollar sales, value added and performance. Thus, these sectors have a major influence on the performance of the national economy.

(5) Food price inflation has been a major contributor to overall inflation in Canada. Inflation in general and food price inflation in particular are especially politically sensitive issues.

(6) The successful pursuit of an industrial strategy which adds value to food products requires successfully performing P.D.R. sectors. Yet, the agricultural sector now accounts for less than forty per cent of the consumer's food dollar.

(7) Historically, there has been a maldistribution of research effort as between agriculturally orientated research and research on the P.D.R. sectors.

(8) Recent government experience would indicate that treating the food system as a single closely-related entity from producer to consumer for research purposes, whilst laudable, is clearly not feasible in practice. Thus, research on the P.D.R. sectors, as with other areas of enquiry related to the food system, will, of necessity, need to be conducted on a sectoral, rather than a systems, basis.

What Research on the Food Processing, Distribution and Retailing Sectors is Required and What are the Priorities in this Research?

(1) Industry Performance:

At this time, little is known about the real performance levels of the P.D.R. sectors as a whole, the separate P.D.R. components, nor of individual industry firms. However, any assessment of the performance of the industry which would be usable for the development of public policies related to the P.D.R. sectors must be preceded by the formulation of an integrated set of performance criteria which would form the framework for the analysis. Development of these criteria and the establishment of performance standards for each criterion is a clear research priority.

(2) Industry Information:

The lack of basic information on the P.D.R. sectors provides a major impediment to any comment on future research advances. If it is agreed that economic analysis of the performance of the P.D.R. sectors is the desired research orientation, then it is essential that the criteria on which industry performance is to be measured are delineated. The criteria chosen will then determine the specific information to be collected. A research orientated data collection and refining procedure would then have the following steps:

- (i) delineation of reasons for data base;
- (ii) specification of measurement criteria;
- (iii) review of available information sources in the light of specified information requirements;
- (iv) where required information is available, check the validity and consistency;
- (v) where the required information is not available, establish the appropriate collection procedure;
- (vi) check the validity and consistency of the new series.

In recent years, the rapid growth in conglomerate firms participating in the food industry has negated the analytical usefulness of information provided by firms (such as company annual reports) if they report on a consolidated basis. If government is to provide an effective policy framework for a national food policy and for the food industry specifically, it is essential that the operations of the sectors are thoroughly understood and, therefore, it may well be necessary for government to legislate companies to provide financial information on a 'line of business' basis.

(3) Regulation of the P.D.R. Sectors:

A comprehensive evaluation of the present regulations affecting the P.D.R. sectors is required. Three broad categories of regulation must be considered.

- the effects of regulations directly related to the processing, distribution and retailing sectors on those within the sectors;
- the effects of regulations directly related to the processing, distribution and retailing sectors on those outside the sectors; for example, consumers and agricultural producers;
- the effects of regulations related to other parts of the food system on the processing, distribution and retailing sectors.

Within each of these categories the following questions should be addressed:

- what is being regulated and what are the specific and overall objectives?
- is the regulation appropriate to current conditions?
- are the regulations emanating from different jurisdictions consistent in purpose and application?
- what are the procedures for implementing new regulations and deleting those which are obsolete?
- what are the costs and benefits of regulations and to whom do the benefits accrue?

(4) Economic Inter-relationships:

The P.D.R. sectors comprise a complex set of operating entities and functions and involve a multiplicity of commodities and products. Improved knowledge as to the impact of changes in policy, costs, volume

of supplies, etc. will assist in the formulation of more effective and efficient policies affecting the P.D.R. sectors.

(5) Production and Distribution Capacity:

At present, little documented evidence is available on the production and distribution, nor of the present degree of capacity utilization of the P.D.R. sectors. Research in this area would aid in policy formulation exercises by public agencies and legislative bodies, as well as serving as planning guides for individual firms and industry groups.

(6) Trade Policy for Food Products:

Most of the existing tariffs on food products have developed in a rather piecemeal way. Research is urgently needed on a number of related areas in this field. These include:

- an assessment of the ability of the domestic food industry to compete in terms of exports and imports;
- an evaluation of the costs and benefits of present Canadian tariff and non-tariff barriers related to the major elements of the food processing, distribution and retailing sectors;
- an evaluation of the potential role of tariff and non-tariff barriers in engendering desired types and levels of industry performance. This would include an appraisal of which industries and their sectors should be protected, which industries and sectors should not be protected and the intra- and extra-sectoral impacts of tariff relaxation.

(7) Food Quality:

Three topics related to food quality have been identified as deserving of research attention. The first of these is evaluating the influence of the food processing, distribution and retailing sectors on

the nutritional levels of diets. Related to this is the second proposed research area which is a review of food quality standards adopted by firms in their production processes and product specifications. Thirdly, research is suggested on an assessment of the costs and benefits of present grading standards for raw agricultural and processed food products and their appropriateness to present demands of the market and institutional needs.

What Resources Currently are Available for Conducting Research on the Processing, Distribution and Retailing Sectors?

Within Canada, there is a long list of research organizations that, potentially, can carry out research on the P.D.R. sectors. However, in practice economic and market researchers with specific expertise in the P.D.R. sectors are very few and very far between.

What Economic and Market Research Currently is Being Undertaken on the Processing, Distribution and Retailing Sectors?

A review of the research studies on the P.D.R. sectors currently being undertaken reveal three major findings:

- Very few research studies address the areas of concern designated as research priorities in this study.

- There is little or no exchange of information on research being undertaken by individual departments within government (both provincial and federal). Currently, there is no mechanism or central information exchange through which economic or market researchers can determine the range of research studies which are on-going on the P.D.R. sectors.

- In compiling the research inventory, the researchers who were contacted almost unanimously expressed their enthusiasm for a system whereby they could access information on on-going studies. Obviously, for researchers investigating the P.D.R. sectors it is a major problem to determine what relevant studies have been carried out in the past and what relevant studies are being carried out at the present.

How Should the Proposed Research Be Co-ordinated?

One strong requirement that emanated from the survey of on-going research was the need for a continuing inventory of economic and market research on the P.D.R. sectors in Canada. Clearly, it is necessary to know what research is being undertaken across the country before any attempt at co-ordination even can be considered. It is recommended that the Agriculture, Fisheries and Food Products Branch of the Federal Department of Industry, Trade and Commerce should undertake the information collection function. This branch has close contacts with food industry trade associations; it is better placed to liaise with provincial departments of industry and commerce (from which provincial market studies are initiated) than other federal departments; it has industry officers representing all commodities and sectors of the food system past the farm-gate who, potentially, are well positioned to keep apprised to proposed research projects; and it has a national rather than a regional perspective of the P.D.R. sectors of the food industry.

The intent of an inventory system would be to have all economic and market research relating to the P.D.R. sectors from both public and the private agencies entered, on computer, into a data base on a project basis. A general updating of the inventory would be required perhaps

two or three times a year, although researchers would be encouraged to add projects to the inventory as they are initiated.

It is recommended that prior to the establishment of an inventory system, an inventory committee should liaise with the Canadian Agricultural Research Council which, relatively recently, has established an inventory of agricultural research and development, to discuss the preferred routes and potential pitfalls in establishing such a system.

I would seem axiomatic that all federal departments with an interest in economic and market research on the P.D.R. sectors would benefit from the exchange of information on relevant proposed and on-going research projects. However, at present there would seem to be little co-operation in this respect. If the federal government is to show leadership in co-ordinating research on the P.D.R. sectors it is suggested that a first step would be to improve the research information exchange process within Ottawa. It is recommended that the Inter-Departmental Committee on the P.D.R. sectors undertake to place 'on-going research' as a regular item on the agenda, and to encourage the general policy of research information exchange between departments.

A large proportion of the relatively limited funds available for economic research on the P.D.R. sectors are expended by five federal government departments. These funds are generally applied to demand research. It is unrealistic to assume that the relevant departments should agree as to the apportionment of funds for demand research among specific research areas and topics. Such a loss of departmental sovereignty on research policy would be both politically untenable and, indeed, probably undesirable. However, it is realistic to assume that these departments should agree as to the general research areas and research

priorities for planned research on the P.D.R. sectors. As important, it would seem desirable that representatives of the P.D.R. sectors themselves should have an input in the direction of such economic research.

In the study, a series of arguments were delineated which specified why research should be undertaken on the P.D.R. sectors. If these arguments are accepted, then a pool of research funds would be necessary to undertake a programme of planned research on the P.D.R. sectors. Realistically, such funds initially would only be forthcoming from the federal government (although, in the longer term, joint government-industry funding might be possible.)

If such funds are made available, it is recommended that a single body be established with responsibility for co-ordinating planned economic research on the P.D.R. sectors, and with the mandate to apportion research funds (perhaps via Treasury Board) among government departments, universities, research groups, independent consultants, etc. in a manner that would best achieve the agreed goals and objectives of a planned research programme.

Such a body might be called the Council for Economic Research on Food Processing, Distribution and Retailing. The Council should meet frequently and Council members should include all key groups with a direct interest in economic research on the P.D.R. sectors. For example:

- representatives of the Federal Departments of Industry, Trade & Commerce, Consumer & Corporate Affairs Canada, Agriculture, Fisheries & Environment Canada
- a representative of the food processing/manufacturing sector
- a representative of the food retailing sector
- a representative of the Economic Council of Canada

- a representative of the Consumers Association of Canada
- a representative of universities.

To provide a direct link with the research inventory system, the officer responsible for managing such a system could act as Secretary to the Council.

It would be essential that the Council view its role in directing planned research within a long-term food policy framework. To this extent, research funds should be directed along two distinct avenues. First, funds should be directed to initiate research in some or all of the seven critical areas identified in the body of this report. Second, funds should be 'invested' in selected universities to stimulate the development of research expertise on the P.D.R. sectors in the future. Such investment might take the form of funding professorships in 'the economics of food manufacturing and/or food retailing'.

It is obvious that the level of funding required to finance a programme of planned research would depend on the intensity and comprehensiveness of the research effort. However, it is likely that an annual sum of at least \$400,000 would be required to finance both a minimal commitment to the recommended research activities over the involvement in the future research expertise. It should be stressed that the planned research programme would require an annual commitment of funds if the longer term research objectives are to be achieved. Indeed, given that the aggregate level of research knowledge and expertise is at such low levels, it is recommended that at least a five-year programme be implemented.

I. INTRODUCTION

As has been pointed out in an earlier report to the Food Policy Group of Consumer and Corporate Affairs Canada^{1/}, information about the Canadian food processing, distribution and retailing sectors heretofore has been episodic, non-cumulative and without unifying orientation. The emphasis of published research and, indeed, on-going research¹ has been (and is) largely on structural dimensions. The efforts to date show a failure to build a dynamic research base with which to progress beyond largely repetitive, elementary and descriptive studies. As a result, they are of limited use for policy prescription purposes. What is required is research that identifies problem areas that are of direct relevance and of critical importance in policy formulation. With these requirements in mind, and cognizant of the shortcomings of previous research on the food industry, the following questions are addressed in this report:

1. Why do research on the P.D.R. sectors?
2. What research on the P.D.R. sectors is required?
3. What priorities are there in the required research?
4. What resources are currently available for conducting research on the P.D.R. sectors?
5. What economic and market research currently is being undertaken on the P.D.R. sectors?
6. How should the proposed research be co-ordinated?

^{1/} See "A Critical Review of Available Research and Statistical Documentation and Analysis on the Processing, Distributing and Retailing Sectors of the Canadian Food Industry, March 1977, Consumer and Corporate Affairs Canada.

^{2/} See Section VI for an inventory of on-going economic and market research on the food processing, distribution and retailing sectors.

II. WHY DO RESEARCH ON THE PROCESSING, DISTRIBUTION AND RETAILING SECTORS?

The existence of the processing, distribution and retailing sectors of the food system is not, in itself, sufficient justification for expending funds on economic research in these sectoral areas. However, a number of more substantive reasons can be cited for undertaking such research.

These include the following:

(1) A number of government departments, most notably Agriculture Canada, have asserted that the food processing, distribution and retailing sectors are presently operating at inadequate levels of efficiency.

(2) There is considerable evidence of an endemic lack of public confidence in the performance of the food processing, distribution and retailing sectors. Indeed, this has been a specific issue on which both consumer and agricultural producer groups focus. Farm organizations frequently assert that farmers' problems are due to inadequate performance and malpractice in the processing, distribution and retailing sectors. Likewise, consumers argue that such factors as the market power of firms in the food industry, excessive advertising, wasteful packaging and inefficient operations are major causes of the seemingly incessant increases in retail food prices. In addition to an endemic problem there are sporadic crises related to specific events, such as the rapid increases in sugar prices in 1974 and 1975 and similar sharp rises in coffee prices in 1976 and 1977. Moreover, the relationships between the parties involved in the food system, notably agricultural producers, food manufacturers and processors, distributors, retailers and consumers are generally characterized by confrontation, adversary positions and mutual antagonism, whereas a system characterized by confidence and cooperation is likely to be more efficient. More published research and better

information exchange would make a substantial contribution to improving inter-sectoral relationships.

(3) It is generally accepted that approximately sixty per cent of the consumer's food dollar is absorbed beyond the farm gate. Hence, the performance of the processing, distribution and retailing sectors has a major influence on the welfare of both food consumers and agricultural producers.

(4) The food processing, distribution and retailing sectors represent the largest component of the whole Canadian industrial sector in terms of dollar sales, value added and employment. Thus, these sectors have a major influence on the performance of the national economy.

(5) Inflation is presently a critical national problem. Changes in the Consumer Price Index published by Statistics Canada are commonly taken as an indication of the rate of inflation. Food accounts for 25 per cent of the components of the C.P.I. and has, in recent years at least, generally exhibited a faster rate of inflation than the other components of the index. Thus, it can be argued that food price inflation has been a major contributor to overall inflation in Canada. Moreover, inflation in general and food price inflation in particular are especially politically sensitive issues. In addition, there is increasing pressure from labour organizations to include a C.P.I. related index factor in wage settlements. Therefore, it can be argued that government should have a sound understanding of the rationale for cost increases within the processing, distribution and retailing sectors and the ramifications of such increases on other parts of the food system, other sectors and the overall economy.

(6) The adding of value to primary raw materials is an integral

part of the industrial strategy of the Federal Government. If successful, such a policy of upgrading of resources can aid in the achievement of a number of desirable national goals, including improvement in the balance of payments position, creation of employment opportunities, encouragement of regional investment and contribution towards increasing the gross national product. Clearly, the successful pursuit of an industrial strategy which adds value to food products requires successfully performing processing, distribution and retailing sectors. Thus, the performance of these sectors is crucial to priority national economic goals.

(7) Historically, there has been a maldistribution of research effort as between agriculturally orientated research and research on the food processing, distribution and retailing sectors. Yet, the agricultural sector now accounts for less than forty per cent of the consumer's food dollar.

(8) Finally, recent government experience would indicate that treating the food system as a single closely-related entity from producer to consumer for research purposes, whilst laudable, is clearly not feasible in practice. Thus, research on food processing, distribution and retailing, as with other areas of enquiry related to the food system, will, of necessity, need to be conducted on a sectoral, rather than a systems, basis.

III WHAT RESEARCH ON THE FOOD PROCESSING, DISTRIBUTION AND RETAILING SECTORS IS REQUIRED?

The need for research on the food processing, distribution and retailing sectors has already been established. At the same time, resources are not presently available to undertake all the studies which might be desired. After a comprehensive review and prolonged discussions with industry participants and observers, seven critical research areas have been identified. These areas are: industry performance, economic inter-relationships within the food system, regulation of the sectors, production and distribution capacity, trade policy, industry information, and food quality. Each of these potential research areas will now be examined. The order of examination does not indicate priorities.

Industry Performance

The performance of the food processing, distribution and retailing sectors is clearly a matter of public interest. In particular, the management of national and provincial macroeconomic policies, Canadian industrial strategy and the welfare of the farmer and consumer sectors are vitally affected by the efficiency and productivity of these sectors. At this time little is known about the real performance levels of the PDR sectors as a whole, the separate processing, distribution and retailing components, nor of individual industry firms. The dearth of data currently extant has been highlighted in an earlier report to the Food Policy Group of Consumer and Corporate Affairs Canada. However, any assessment of the performance of the industry which would be usable for the development of public policies related to the processing, distribution and retailing sectors must be preceded by the formulation of an integrated set of performance criteria which would form the framework for the analysis. Development of these criteria is a clear

research priority. Analysis of performance involves two components. First, the specific criteria for judging industry performance must be established, and, secondly, performance standards must be developed for each criterion. While this list may not be definitive, performance criteria would include operational or technical efficiency, pricing efficiency, technological progressiveness, product suitability, profit rates, cost of sales promotion and ethics of industry practices. The second component, the choice of a standard of comparison or norm for each criteria, is a critical factor in measuring and evaluating the level of performance of the processing, distribution and retailing system. The development of the necessary criteria and standards of comparison is not a simple task. Considerable academic research effort has been directed towards developing a set of theories, concepts, methods and data that are necessary and sufficient for the construction of an integrated framework for the quantitative evaluation of industry performance, particularly in the area of market systems. No simple set of workable criteria and standards which are universally applicable has yet been developed. Nonetheless, the specification of a usable set of performance measures for the food processing, distribution and retailing sectors is both urgent and essential. Obviously, the emphasis in the proposed research should be on applicability and utility rather than theoretical completeness and purity. Basically, what is needed is a complement of performance criteria and comparison standards that are usable by government, by the trade and, particularly, by the public (that is, the consumer), and for which the necessary data can be generated.

It is only after the conceptualization and measurement standards have been developed into an analytical framework that the substantial issues can be addressed, particularly the issues of the present levels of performance

in the processing, distribution and retailing sectors, development of the appropriate policy objectives and instruments for these sectors and specification of adjustments designed to improve performance.

Economic Inter-relationships

The food processing, distribution and retailing sectors comprise a complex set of operating entities and functions and involve a multiplicity of commodities and products. Physical and economic relationships and inter-dependencies abound, both within the PDR sectors and between the PDR sectors and other sectors of the food system, notably the agricultural production, consumer and government sectors. Characteristically, the output of one firm, sub-sector or sector is the input for another. Thus, changes in policies, supplies, demands, prices or regulations, for example, within a particular area can have direct and indirect effects in other areas. Moreover, these indirect effects can be disproportional or even dysfunctional in other areas. Therefore, for any policy instrument affecting the food system to be efficient and effective an assessment of possible indirect effects is essential. Such assessments have not been made in the past. Changes in agricultural policy, in particular, have typically been made with no regard for other sectors of the food system. With the development of a national food policy, consideration of the wider ramifications of any policy change becomes imperative. However, the type of assessment suggested requires some analytical knowledge of the inter-relationships involved, both within the PDR sectors and between this and other sectors of the food system. Neither the data sources nor the operational facility to analyze intra-system and extra-system consequences of changes affecting the processing, distribution and

retailing sectors are available at present.

One approach to developing a comprehensive schema of the economic flows in the processing, distribution and retailing sectors and the main interfaces with the other sectors of the food system is the specification of a formalized input-output model of the food system in which the sectors are explicitly examined and detailed. However, it is not immediately and unequivocally obvious that development of a new full input-output model is the most efficient use of available research resources. It is recommended that research be undertaken to evaluate the suitability and potential contribution of such a model. In addition, the possibility of adapting or expanding one of the many macroeconomic policy analysis models presently in use should be explored. This research on the feasibility of utilizing a formal input-output model is likely to take some time. In the interim, at least, and perhaps as a continuing supplement to an input-output model, should one be developed, it is recommended that a cost components model be employed. This would involve identification and specification of key cost components by commodity, industry and sector. It is suggested that the vehicle of a standardized income statement format, such as in Table 1, be utilized for this purpose. The analysis would be of the aggregative type, focused at the sectoral level, rather than being concerned with the microeconomic aspects related to individual firms.

Regulation of the Processing, Distribution and Retailing Sectors

At present there are a great number of federal, provincial and municipal regulations related to the food processing, distribution and retailing sectors. Those in the food industry frequently argue that many of the regulations are obsolete, counter-productive, inefficient, ineffective

TABLE 1: FOOD INDUSTRY COST FACTORS

	<u>Present Cost Level</u>	<u>Change in Cost Factor</u>	<u>Impact of Change in Cost Factor</u>
I.	RAW MATERIALS		
	Food Processing		
	Food Distribution		
	Total Food Industry		
II.	WAGES AND SALARIES		
	Food Processing		
	Food Distribution		
	Food Retailing		
	Total Food Industry		
III.	PACKAGING MATERIALS		
	Food Processing		
	Food Distribution		
	Food Retailing		
	Total Food Industry		
IV.	ADVERTISING		
	Food Processing		
	Food Distribution		
	Food Retailing		
	Total Food Industry		
V.	TRANSPORTATION		
	Food Processing		
	Food Distribution		
	Food Retailing		
	Total Food Industry		
VI.	ENERGY COSTS		
	Food Processing		
	Food Distribution		
	Food Retailing		
	Total Food Industry		
	TOTAL		

and frequently are duplicated as between various departments within government or as between the different levels of government. Examples of existing discrepancies and contradictions within regulations have been documented.^{2/} Critics of the food processing, distribution and retailing sectors, on the other hand, take the view that industry does not demonstrate adequate public responsibility and that further institutionalized regulation is required.

As a matter of priority a comprehensive evaluation of the present regulations affecting food processing, distribution and retailing is required. Three broad categories of regulation must be considered:

- the effects of regulations directly related to the processing, distribution and retailing sectors on those within the sectors;
- the effects of regulations directly related to the processing, distribution and retailing sectors on those outside the sectors; for example, consumers and agricultural producers;
- the effects of regulations related to other parts of the food system on the processing, distribution and retailing sectors. An example which would fall in this category is the effects of supply-management oriented producer marketing boards for a particular product on the related processing, distribution and retailing functions.

Within each of these categories the following questions should be addressed:

- what is being regulated and what are the specific and overall objectives?
- is the regulation appropriate to current conditions?
- are the regulations emanating from different jurisdictions consistent in purpose and application?

^{2/} For example, the inconsistencies in legal standards governing ground beef as between the Meat Inspection Act and Regulations and the Food and Drugs Act and Regulations were pointed out by the Food Prices Review Board in its publication Report on Ground Beef released in June, 1974.

- what are the procedures for implementing new regulations and deleting those which are obsolete?

- what are the costs and benefits of regulations and to whom do the benefits accrue?

Effective regulation of industry has considerable potential to encourage and guide desired types and levels of performance. At the same time, ill-conceived and poorly implemented regulations can impede the productivity and progressiveness of an industry. As a pilot exercise, it would be pertinent to draw up a schema illustrating the impact of provincial and federal regulations and legislation on, for example, a specific commodity area, from farm gate to retail counter. Whilst such an initial exercise would be largely descriptive, it would serve to delineate the types and boundaries of jurisdiction from which detailed cost-benefit analyses could be undertaken.

In addition to research to review the impacts and appropriateness of present regulations, a study is required of the shortcomings and gaps in existing legislation in relation to national economic and social goals and, especially, with respect to achieving the objectives of a national food policy and guiding industry performance in desired directions. One particular area where such research is imperative is that of the quality and effects of industry advertising. Certainly, legislation designed to eliminate deceptive and blatantly misleading advertising (that is, advertisements which state false claims) is presently in place. Further, a number of specific products cannot be advertised in particular media. However, at the present time government does not have a role in monitoring and supervising the message quality of advertisements. Thus, as long as an advertiser does not blatantly mislead or deceive the consumer, there is no control on the proportion of persuasive content relative to factual content. Life-style advertising,

for example, tends to have a highly persuasive bias. It is conceivable that the advertising emphasis given to, and the image developed for, a specific product or product group could well be at odds with the objectives of a national food policy. For example, a nutritionally orientated objective of a food policy might be the reduction of sugar intake (particularly by children). In this case, advertisements designed to maintain/increase sales of a breakfast cereal which was 60 per cent sugar by weight without making this fact explicit to the consumer would clearly be in direct conflict with the stated objectives. It is suggested that research be undertaken to assess the feasibility of establishing a facility with the capacity to monitor, analyze and prescribe changes in advertising message content for food products, both with respect to industry conduct and types and levels of performance achieved. Such a facility would be expected to provide the research basis for policy formulation in the area of food advertising.

Production and Distribution Capacity

At present little documented information is available on the production and distribution capacity, nor of the present degree of capacity utilization of the food processing, distribution and retailing sectors. One example of the evidence of the value of this kind of information is the widespread enthusiasm with which those in the trade and industry observers received the Food Prices Review Board study of meat processing capacity, which was released in August, 1975. Clearly, more documentation of this type would aid in policy formulation exercises by public agencies and legislative bodies, as well as serving as planning guides for individual firms and industry groups. Associated with research to specify presently existing production and distribution capacity should be research on models of efficient organization

(particularly the optimum number, location and scale of plants) within market areas, industries and function which take the present organization of industry into consideration. This work would help to identify and assess the importance of existing and potential production and distribution constraints within the system, such as:

- physical and institutional transportation constraints;
- private and public management training programs;
- relevance of educational courses offered by schools, colleges and universities;
- availability of inputs such as capital, energy and human capital.

In addition, the research should include an assessment of the degree to which domestic and export market opportunities for adding value to raw farm products through further processing have been exploited. Finally, an evaluation should be made of the capacity of industry sectors to adapt to changes in the environment in which they operate, such as changing consumer demands, variations in product supplies and changing government legislation, for example.

Food Quality

Three topics related to food quality have been identified as deserving of research attention. The first of these is evaluating the influence of the food processing, distribution and retailing sectors on the nutritional levels of diets. Related to this is the second proposed research area which is a review of food quality standards adopted by firms in their production processes and product specifications. Thirdly, research is suggested on an assessment of the costs and benefits of present grading standards for raw agricultural and processed food products and their

appropriateness to present demands of the market and nutritional needs.

Trade Policy for Food Products

Most of the existing tariffs on food products have developed in a rather piecemeal way. Research is urgently needed on a number of related areas in this field. These include:

- an assessment of the ability of the domestic food industry to compete in terms of exports and imports;

- an evaluation of the costs and benefits of present Canadian tariff and non-tariff barriers related to the major elements of the food processing, distribution and retailing sectors;

- an evaluation of the potential role of tariff and non-tariff barriers in engendering desired types and levels of industry performance. This would include an appraisal of which industries and their sectors should be protected, which industries and sectors should not be protected and the intra- and extra-sectoral impacts of tariff relaxation;

- an assessment of the potential contribution of export market development (through market diplomacy, for example) to greater economic efficiency in the processing, distribution, and retailing sectors. Factors considered here should include, for example:

- (i) the opportunity to capture assembly, manufacturing and marketing scale economies;

- (ii) cost reductions through greater capacity utilization and/or seasonal variations in throughput;

- (iii) rationalization of transportation;

- (iv) labour and/or management specialization economies.

This research should include consideration of exports and imports

for all processed levels, including raw agricultural products, semi-processed products, finished foods and substitute products.

Industry Information

In an earlier report^{1/}, the conclusion was drawn that there was 'a dearth of meaningful statistical information for use in policy analysis for the processing, distributing and retailing sectors of the Canadian food system.' It is axiomatic that this lack of basic information provides a major impediment to any current or future research advances in the P.D.R. sectors. The data problem is dichotomous: on the one hand, there is the question of what changes are necessary to continuous data series that are presently available; and on the other hand, the matter of what new data series should be initiated in order to provide a comprehensive data base and then to decide the direction the research should take. Clearly, the policy focus must be established first. For example, if it is agreed that economic analysis of the conduct and performance of a specific industry is the desired research orientation, then it is essential that the criteria on which industry performance is to be measured are delineated. The criteria then will determine the specific information to be collected.

In practice, a research orientated data collection and refining procedure would have the following steps:

- (1) delineations of reasons for data base;
- (2) specification of measurement criteria;

^{1/} See 'A Critical Review of Available Research and Statistical Documentation and Analysis on the Processing, Distributing and Retailing Sector of the Canadian Food Industry', March 1977, Consumer and Corporate Affairs Canada.

(3) review of available information sources in the light of specified information requirements;

(4) where required information is available, check the validity and consistency;

(5) where the required information is not available, establish the appropriate collection procedure;

(6) check the validity and consistency of the new series.

A second area of concern related to industry information is that of the usefulness of the data provided by firms for economic analysis. In recent years there has been a rapid growth in conglomerate firms, both food industry conglomerates with operations in a number of sectors and/or commodity areas and of non-food firms establishing one or more subsidiaries in the food industry. This raises a problem in that the information commonly provided by firms, such as the company annual report, is on a consolidated basis and, thus, not useful for sectoral analysis. For example, a company such as Canada Packers is in the meat packing, vegetable oil refining, livestock feeds, animal health, fertilizers, soap, dairy products, eggs, broiler chicken processing, leather and a number of other industries. Yet, information on profitability and key financial ratios are only available for the company as a whole.

The sensitive question to be posed is whether government should have access to disaggregated financial data for conglomerate companies and, indeed, whether they should have access to such data on a 'line of business' basis where one company is participating in two industry sectors simultaneously. Clearly, if government is to provide an effective policy framework for a national food policy and for the food industry specifically, it is essential that the operations of the sectors are thoroughly under-

stood and that government legislate companies to provide financial information on a 'line of business' basis.

IV. WHAT ARE THE PRIORITIES IN THE REQUIRED RESEARCH?

Seven areas of research related to the food processing, distribution and retailing sectors have been identified as deserving of considerable research effort. Thus, in an absolute sense, all these identified areas can be considered as a priority for research. However, in a relative sense, a ranking is required for research planning purposes. After much discussion with concerned individuals and interested groups and after prolonged deliberation the following is suggested as the order of priority for the seven research areas previously identified:

- (1) Industry Performance
- (2) Industry Information
- (3) Regulation of the Processing, Distribution and Retailing Sectors
- (4) Economic Inter-relationships
- (5) Production and Distribution Capacity
- (6) Trade Policy for Food Products
- (7) Food Quality

Some of the more salient arguments underpinning these rankings are now considered.

In the course of conducting this research it became clear that there was widespread concern about the levels of performance presently obtaining in the food processing, distribution and retailing sectors. This topic is clearly a matter of greatest research priority for the following reasons:

- assertions by government departments of inadequate levels of performance in the processing, distribution and retailing sectors;
- the widely acknowledged lack of public confidence in the

performance of these sectors;

- the stated commitment by the Federal Government in its White Paper 'A Food Strategy for Canada' to monitor the performance and enhance the productivity and efficiency of the food processing, distribution and retailing sectors.

It is clear that the industry information is closely related to and provides an empirical basis for the assessment of industry performance and is, thus, also a matter of high research priority. As was mentioned earlier, once the criteria for evaluating sectoral performance have been established, the next stage is to collect the specific information with which to analyze existing industry performance levels.

The placing of regulation of the food processing, distribution and retailing sectors as the third priority reflects both widespread industry concerns in this area and the need for government to demonstrate its commitment to improving food industry productivity and efficiency by review and rationalization in an area in which it alone has primary control. Moreover, it is through changes in regulations that the government can achieve the most direct and immediate changes in industry conduct and performance.

The topic of economic inter-relationships is accorded the fourth-place ranking because improved knowledge in this area will assist in the formulation of more effective and efficient policies affecting the food processing, distribution and retailing sectors. With the increasing emphasis on the development of a comprehensive national food policy, knowledge of the inter-relationships within these sectors and between these and other sectors of the food system is imperative.

Without diminishing the importance of research on production and

distribution capacity, trade policy for food products and food quality, there are no compelling a priori reasons for placing one of these ahead of the other. In short, whilst these three areas are considered to have a lower priority than those ranked one to four, they are deserving of immediate research effort.

V. WHAT RESOURCES CURRENTLY ARE AVAILABLE FOR CONDUCTING RESEARCH ON THE PROCESSING, DISTRIBUTION AND RETAILING SECTORS?

In this section, the comparative strengths and weaknesses of alternative research organizations are delineated with respect to their ability to undertake research on the P.D.R. sectors. Eight organizational categories have been identified. In some cases, one specific research organization may fit more than one category (for example, a government funded and a privately funded research group are two distinct categories, yet there are cases where a research organization is funded by both government and the private sector). The eight categories and their relative strengths and weaknesses are presented below. In addition, specific examples of the research organizations included within each category are given.

A. Federal Government Departments

Federal Departments of: Agriculture; Consumer & Corporate Affairs; Industry, Trade & Commerce; Fisheries & Environment; Finance; Regional Economic Expansion; Supply & Services (Bureau of Management Consultants).

STRENGTHS

- have dollar resources
- research man-years available
- proximity to policy planners ensures that research usually of relevance to issues at hand
- some departments have access to confidential industry data
- good research support services (computer, clerical, etc.)

WEAKNESSES

- industry often suspicious of government's research intentions and objectives. Makes data collection function difficult
- departments who do not directly service the P.D.R. sectors have only limited industry contacts
- limited research expertise on the P.D.R. sectors
- traditional 'bureaucratic lag' between undertaking research and release of a report, i.e. research results often 'dated' when released
- pressure to undertake demand research on current policy issues rather than planned research on longer term issues
- research conclusions drawn by one specific department perceived (whether rightly or wrongly) to reflect the interest of the group that the department represents (e.g. CCAC: pro-consumer, anti-business and agriculture; CDA: pro-farmer, anti-P.D.R. sectors; IT&C: defensively pro-business).

B. Provincial Government Departments

Provincial Departments of: Industry & Tourism; Consumer Relations; Finance; Agriculture; Fisheries & Environment; Economic Development.

STRENGTHS

- some dollar resources
- relatively strong industry contacts within a province
- proximity to provincial policy planners, potentially, should ensure that research is of relevance to current provincial issues
- have access to confidential provincial industry data.

WEAKNESSES

- most large food companies operate in more than one province, therefore, difficult to gain company-wide or industry-wide perspective
- limited jurisdiction, particularly in relation to national food policy;

B. Provincial Government Departments, contd.

WEAKNESSES contd.

- less financial and manpower resources than Federal Government
- generally, researchers have competing duties
- limited research expertise on the P.D.R. sectors
- 'bureaucratic lag' in publishing research results
- strong pressure to undertake demand rather than planned research
- industry suspicious of government's research intentions and objectives
- research conclusions perceived to be, potentially, more politically malleable at provincial vis-à-vis federal level

C. Universities and Other Educational Institutions

Universities; Community Colleges; Technical Institutions

STRENGTHS

- perceived as being 'independent' researchers
- good research support (student research assistants, computers, etc.)
- breadth of research experience readily available
- low per diem rates relative to independent consultants.

WEAKNESSES

- limited industry contacts
- limited industry knowledge and expertise on the P.D.R. sectors
- have competing duties
- apparent difficulties in meeting report deadlines
- may well have a theoretical rather than pragmatic research bias
- conflict of objectives for undertaking research, i.e. student requirements vis-à-vis client requirements

D. Trade Associations

Conference Board of Canada; Retail Council of Canada; Canadian Federation of Agriculture; Grocery Products Manufacturers of Canada; Meat Packers Council of Canada.

STRENGTHS

- good industry contacts
- appreciation of major problems as perceived by sector they represent
- good access to information on sector they represent.

WEAKNESSES

- limited in-house analytical experience
- seen as a vested interest group
- very selective of specific project support
- limited flexibility and perspective, i.e. typically represent the interests of only one sector (e.g. p. or r.) and perceive major industry problems as being those problems within their own sector.

E. Independent Consultants

STRENGTHS

- can concentrate and co-ordinate considerable expertise on a project (i.e. have experience in research team management)
- some have good industry contacts
- independent
- dispensable
- inter-sectoral research experience and expertise
- generally meet project deadlines

WEAKNESSES

- few companies with the necessary expertise
- ad hoc nature of project assignment causes difficulty of building on previous research experience in a specific field
- not directly involved in the food industry, thus, perceived by the industry as 'outsiders'
- high per diem rates relative to university professors.

F. Government Funded Research Organizations

Economic Council of Canada; Consumer Research Council; Ontario Economic Council; Government Boards of Inquiry (Beef Inquiry, Food Prices Review Board, etc.)

STRENGTHS

- are relatively independent
- research man-years available
- good research support services
- breadth of economic research expertise
- apparent direct costs of undertaking a research project are relatively low
- ability to concentrate considerable resources on one project
- experience in longer-term planned research
- low competing calls on time.

WEAKNESSES

- limited research expertise on the P.D.R. sectors
- 'bureaucratic lag' in publishing research results
- limited industry contacts (although researchers may have an indirect contact via government appointed industry directors).

G. Privately Funded Research Organizations

C.D. Howe Research Institute; Fraser Institute; Canada West Foundation

STRENGTHS

- can draw on a wide range of expertise (university professors, independent consultants, and in-house staff)
- experienced in project co-ordination
- have potential to be independent

G. Privately Funded Research Organizations contd.

WEAKNESSES

- limited in-house research resources and, typically, a number of projects competing for these resources
- may purport to be independent but actually represent a specific economic philosophy (e.g. free market, minimum government intervention)
- limited research expertise on the P.D.R. sectors
- limited industry contacts

H. New Independent Research Organizations

STRENGTHS

- can provide a high concentration of expertise
- can provide intersectoral research expertise
- co-ordination of research is facilitated

WEAKNESSES

- typically, a long lag between start-up and research facilitating being fully 'on-stream'
- potentially, a duplication of already existing research facilities
- problem of obtaining sufficient funds and competent staff
- industry contacts and credibility with industry have to be built up.

The seemingly long list of research organizations that, potentially, can carry out research on the P.D.R. sectors is not indicative of any breadth and/or depth of expertise in this area. Under every category, 'limited research expertise on the P.D.R. sectors' is stipulated as a weakness of existing organizations. Within Canada, economic and market researchers with specific expertise in the processing, distribution and/or retailing sectors are very few and very far between. (Interestingly, the

situation is not dissimilar in the U.S., where only a handful of academics focus their research efforts on the P.D.R. sectors). Potentially, Category F, 'Government Funded Research Organizations', seems to offer the most effective vehicle for undertaking required research if such organizations have sufficient flexibility to hire research advisors, whether they be university professors or independent consultants, with proven expertise on the P.D.R. sectors. In this manner, the government funded research organization could supplement its own inherent strengths with additional strengths from these two categories of research organizations

VI. WHAT ECONOMIC AND MARKET RESEARCH CURRENTLY IS BEING UNDERTAKEN ON THE PROCESSING, DISTRIBUTION AND RETAILING SECTORS?

Seven areas have been identified as being of critical importance to policy makers and which warrant a comprehensive research effort to facilitate the task of effective policy formulation. It is pertinent to review the research studies carried out in the past and research studies that, currently, are on-going to ascertain whether the seven nodal areas have been or are being addressed by economic and market researchers alike.

In a previous study ^{1/}, the conclusion was drawn that over the period 1962 to 1976 economic and market research studies on the P.D.R. sectors have been 'almost exclusively descriptive and concerned with industry structure rather than addressed to the more pertinent fields of industry conduct and economic performance.' A review of on-going research studies indicates that this statement still holds true.

^{1/} A Critical Review of Available Research and Statistical Documentation and Analysis on the Processing, Distributing and Retailing Sectors of the Canadian Food Industry, C.C.A.C., March 1977.

Economic and market researchers across Canada in

- universities
- federal and provincial government
- independent consulting companies
- government funded research organizations
- privately funded research organizations
- and trade associations

were canvassed and asked to provide details on current research work being undertaken on the P.D.R. sectors, the expected date of completion, the specific personnel involved, the source of funding, and the amount of funding. Information on the latter was either not available or not readily forthcoming in a large proportion of cases. If 'in-house' research work was being carried out by provincial and/or federal government then, typically, a research budget per se had not been determined. If research work was being carried out by independent consultants and/or university professors on behalf of government then both the contractor and the contractee, typically, were unwilling to release the dollar value of the contract. Thus, it has not proved possible to determine a specific dollar figure that represents national expenditure on economic and market research on the P.D.R. sectors.

Funds available for economic research on the P.D.R. sectors almost entirely emanate from the federal and provincial governments. It is estimated that the sum total of all economic research contracts awarded over the past year did not exceed \$200,000. It should be pointed out that much of this total sum was expended on areas of research which bear only scant relevance to contemporary policy issues and, therefore, are of only ancillary interest to policy planners.

A review of the research studies on the P.D.R. sector currently being undertaken reveal three major findings.

- Very few research studies address the areas of concern designated as research priorities in this study.

- There is little or no exchange of information on research being undertaken by individual departments within governments (both provincial and federal). That is, it is the exception rather than the rule that a researcher from Department A will be aware of the research studies being undertaken in Department B. Indeed, it is not unusual for the researcher from Department A to be unaware of other relevant research being undertaken within that same department. Currently, there is no mechanism or central information exchange through which economic or market researchers can determine the range of research studies which are on-going on the P.D.R. sectors.^{1/}

- In compiling the research inventory, the researchers who were contacted almost unanimously expressed their enthusiasm for a system whereby they could access information on on-going studies. Obviously, for researchers investigating the P.D.R. sectors it is a major problem to determine what relevant studies have been carried out in the past and what relevant studies are being carried out at the present.

^{1/} Arguably, the Social Science Federation of Canada (formerly the Social Science Council Research Council of Canada) carry out this role. However, it is evident that the researcher population that the S.S.F.C. draws upon when compiling lists of on-going projects is very limited. A selective research of the S.S.F.C.'s computer files revealed only five studies on economic and market research in the food industry.

Initially, it was anticipated that the on-going economic and market research studies would be categorized (see Section III). However, such was the paucity of studies that could be placed under these headings that the studies have been categorized under headings that indicate the functional area in which the studies actually were carried out. These are:

- RETAILING
- RETAIL PRICE MONITORING
- PRICE SPREAD ANALYSIS
- PROCESSING/MANUFACTURING
- DISTRIBUTION
- GENERAL
- MARKET DEVELOPMENT/PRODUCT DEVELOPMENT

RETAILING

1. How Consumers Pick Stores

A summary of the author's previously funded findings (7 food and 5 fashion studies) presented at the annual conference of the Association for Consumer Research, Chicago, U.S.A.

Publication by mid-October.

Dr. D. Tigert, Department of Business Administration, University of Toronto.

2. A Study of Shopping Centres in Canada

Includes food and non-food retail operations. Will investigate the impact of shopping centres on retail competition.

Carried out for Resources Branch, Bureau of Competition Policy by B. Mallen, Concordia University, Montreal. Completion mid-1978.

3. Private Branding of Food Products
Study undertaken by L. McCartney as an M.A. thesis.
P. Moncrieff, Department of Agricultural Economics, McDonald Campus, McGill University, Montreal.
To be completed November, 1977.
4. Trading Areas and Store Image and Its Effect on Patronage
Undertaken for Sobey's (Nova Scotia).
Completion by November, 1977.
Dr. Schweitzer, Dalhousie Business School
5. Industry Study on Food Distribution in Canada
Deals with the future trend to "super-stores" and the problem of monopolies. Stresses the position the potential investor should take.
Publication by end of October.
Don Tigert, Burns-Fry Ltd., Toronto.
6. The Impact of Beef Retailing and Merchandising by Four Major Retail Chains in Saskatchewan
Completion by end of October.
Carried out for the Saskatchewan Department of Agriculture by the Agricultural Economic Research Council of Canada.
7. The 1977 Survey of Chains and Groups
An annual survey of retail food chain supermarkets and group stores. Carried out by the Research Department, McLean-Hunter Publishing Company for the Canadian Grocer (trade publication).
Published in the August, 1977 issue.

8. The 1976 Figure Exchange

A survey of chains and independent supermarket operating costs. Includes a survey of supermarket sales per man hour for the first part of 1977.

Results to be presented at the Canadian Federation of Retail Grocers Annual Convention (Oct. 23 to 25, Constellation Hotel, Toronto).

Publication in the December, 1977 issue of Canadian Grocer.

Edited by F. M. Shove, McLean-Hunter Publishing Company.

9. Supermarket Manager Study

Includes information about the authority individual managers have in selecting merchandise, allocating space for display, etc.

Carried out by C. A. Ambler for Canadian Grocer.

Results available by end of 1977.

10. Franchised Beef Retail Operations

A study of structure (M.A. thesis).

Funded by Alberta Agriculture.

M. Hawkins, Department of Agricultural Economics, University of Alberta.

Completed September, 1977.

11. Hospital and Institutional Buyers for Meat

Funded by Alberta Agriculture (Ph.D thesis).

M. Hawkins, Department of Agricultural Economics, University of Alberta.

To be completed May, 1978.

12. Labour in Grocery Retailing
On discrimination against women, structure of wages and employment. M.A. thesis.
University of Manitoba, Dr. Philipps and Christine Rollo (Department of Labour, Ottawa).
Completion within one year (i.e. before September, 1978).
13. Report on the Grocery Retail Business in Quebec
Undertaken by Joseph Vaillancourt of the Department of Trade and Commerce, Province of Quebec.
Publication by the end of 1977.
14. The Changing Role of Corner or Neighbourhood Grocery Stores
To be completed by the end of 1977.
George Zieber, Department of Geography, University of Lethbridge.
15. A Study of Alberta's Food Industry
Analysis of structure, conduct and performance, with particular reference to the effects of market dominance by one retailer. On-going. To be completed early 1978.
Department of Consumer Affairs, Government of Alberta.

RETAIL PRICE MONITORING

1. Average Retail Food Prices for Edmonton and Calgary (on-going since September, 1973 in Edmonton and January, 1974 in Calgary).
Weekly survey of average prices for over forty food items.
Statistics Division, Alberta Agriculture.

2. Food and Farm Prices of Manitoba

Weekly survey of one store from each of the three largest chains in Winnipeg. Also report wholesale and farm prices.

Published weekly.

Communications Branch, Manitoba Department of Agriculture.

3. New Brunswick Retail Food Price Survey

A survey of retail food prices for a broad range of foods.

Published quarterly.

Home Economics Branch (Nancy Cook), New Brunswick Department of Agriculture.

4. Monitoring Food Prices in Saskatchewan

A report describing and analyzing a weekly food price survey in major centres in Saskatchewan.

Published Summer, 1977 (confidential).

Department of Consumer Affairs, Saskatchewan Provincial Government.

Carried out by G. Devine, University of Saskatchewan, Saskatoon Campus.

G. Devine and S. Kulshrestha currently are examining this report with a view to undertaking a project on retail pricing strategy.

5. Costing Study on Basic Food Products in Newfoundland

A study of pricing basic food needs, sixty communities studied.

Carried out every six months.

Department of Extension Services (Mary MacKey), Memorial University, St. John.

6. Monitoring Retail Prices in Winnipeg

Survey of retail prices for a market basket of items (including food). Undertaken each Fall and/or Spring (no survey this Fall).

Dr. Beckman, Department of Business Administration, University of Manitoba.

7. Regional Food Comparisons in British Columbia

A basket of food items representative of B.C. consumption patterns is priced in seven cities (monthly).

Department of Consumer Affairs, Government of British Columbia.

PRICE SPREAD ANALYSIS

1. Marketing Margins for Beef in Ontario

Analyzes the factors determining farm-wholesale and wholesale-retail margins for beef.

Funded by O.M.A.F. For public use.

Completion date, November, 1977.

2. A Study of Marketing Margins for Selected Food Commodities in Toronto and a Representative Centre in the U.S.

Bureau of Competition Policy, Resources Branch, W. Holm.

Completion by end of October. Confidential.

3. Measuring Price Spreads for Beef and Pork

Analysis of wholesale and retail margins in representative centres in Canada, with U.S. comparisons.

Economics Branch, Agriculture Canada, D. Ricard. Some results to be published shortly.

Study to be expanded to include dairy products, fruit and vegetables and sugar.

4. Forecasting Price Spreads for Food Commodities

A model for forecasting price spreads (i.e. marketing margins) for some basic food commodities.

Economics Branch, Agriculture Canada, D. West and T. Hazledine.

5. Marketing Margins for Selected Food Commodities in Five Centres in Canada and in the U.S.

Analysis of wholesale and retail margins for beef, poultry, eggs, fluid milk, cheese, butter and bread.

Economic Research Division, Anti-Inflation Board, J. Berry, Completion by January, 1978.

6. The Implications of Supply Management Decisions on Processing and Retailing Margins - The Case of Broilers
7. Retailer and Processor Margin Behaviour for Red Meats

Both 6 and 7 are in the conception stage.

Department of Agricultural Economics, University of Guelph
(Dr. S. Lane).

8. Dairy Processing Margins

A study of processing margins for dairy products undertaken for Economics Branch, Agriculture Canada.

Completed in September, 1977.

Bureau of Management Consultants, Department of Supply and Services.

PROCESSING AND MANUFACTURING

1. Report on the Biscuit Industry

An internal study on the structure of the Canadian biscuit industry.

Co-ordinated by D. McNichol, Grocery Products Division,
Agriculture Fisheries and Food Products Branch, I.T. and C.

Completion by early 1978.

2. Market Structure of the Food Industry in Alberta

An inventory study, student summer project for Alberta Agriculture.

Completion by December, 1977.

M. Hawkins, Department of Agricultural Economics, University of Alberta.

3. Study of the Confectionary Industry in Quebec

Undertaken by Lan D'Guay Consultants Ltd. for the Department of Trade and Commerce, Province of Quebec.

Completed September, 1977.

4. Special Study on the Bakery Industry in Quebec

On new ways to measure the level of technology and technological change in the baking industry. Carried out by the Department of Trade and Commerce (P.Q.) in association with Ecole Polytechnique, Montreal.

4. continued
Completed mid-September, 1977.
Research study to be extended in November.
5. A Study of Prepared and Frozen Foods in Quebec
Undertaken by Lan D'Guay Consultants Ltd. for the Department of Trade and Commerce (P.Q.).
Completed mid-September, 1977. Confidential.
6. The Turkey Industry in Ontario
Describes and analyzes the situation in the processing, storing, distribution and marketing of turkeys in Ontario.
Economics Branch, Ontario Ministry of Agriculture and Food.
For public use, to be published January, 1978.
7. The Egg Industry in Ontario
Describes the institutional setting surrounding the production, grading, pricing and marketing of eggs in Ontario.
Economics Branch, Ontario Ministry of Agriculture and Food.
For public use, publication by January, 1978.
8. The Production and Marketing of Mushrooms in Ontario
Determines the costs of production as well as describing the distribution system.
Economics Branch, Ontario Ministry of Agriculture and Food.
For public use, to be published July, 1978.
9. A Study of the Processed Fruit and Vegetable Industry in Canada
Background research report providing basis for recommendations re. tariff changes.
To be released in December, 1978 (estimated).
Tariff Board, Research Division.

10. Impact on Consumers of Proposed Tariff Changes on Processed Fruit and Vegetable Products

A paper defining the impact of the proposed tariff changes from a trade association point of view.

To be published November, 1977.

E. Banting, Canadian Food Processors Association.
11. An Economic Analysis of the Tomato Processing and Growing Industry in Southern Ontario

A Master's thesis.

Completion in late 1978.

Dr. Palmer and John Henderson, Department of Economics, University of Western Ontario.
12. An Evaluation of the Impact of Food Processing and Production Relative to Regional Development Impacts

With particular reference to key crops in Manitoba.

Funded by D.R.E.E. and completion date estimated to be March, 1978.
13. Processing Milk Costs in New Brunswick

Dairy model development and analysis of processing and distribution costs.

To be undertaken by consultants for the New Brunswick Department of Agriculture.

Completion date still to be determined.
14. Changing Patterns of Dairy Processing Plants in Ontario

Analyzes trends in the number and the distribution of dairy processing plants in Ontario.

Economics Branch, Ontario Ministry of Agriculture and Food.

For public use, to be released November, 1977.
15. Optimum Number and Location of Fluid Milk Processing Plants in Southern Ontario

Master's thesis, grant aided by the Ontario Milk Marketing Board (O.M.M.B.).

Completion by end of 1978.

15. continued
Dr. S. Lane and J. L. Barrera, Department of Agricultural Economics, University of Guelph.
16. The Impact of Seasonality of Milk Supplies on Butter and Skim Milk Powder Processing Plants
Dr. S. Lane and J. Sanbede. Completion by Summer, 1978.
17. The Impact of Seasonality of Milk Supplies on Cheddar Cheese Processing Plants
Dr. S. Lane and J. Followell.
Completion at least one year.
Both above projects funded by O.M.M.B.
18. An Assessment of the Effects of Marketing Boards on the Structure and Behaviour of the Agribusiness Sector
Funded by O.M.A.F. and to be completed mid-1978.
Dr. T. Funk, Department of Agricultural Economics, University of Guelph.
19. Production and Processing Costs for Chicken in Ontario
Undertaken by P. S. Ross Ltd. for the Ontario Chicken Marketing Board and Ontario chicken processors. Final report was due on September 21, 1977.
Ontario Ministry of Agriculture and Food, Farm Products Marketing Board.
20. An Econometric Analysis of Food Processing Industry Structure and Performance
Analyses profitability in the food and beverage industries (cross sectional and time series analyses).
Completion in a few months.
Economic Branch, Agriculture Canada. Undertaken by T. Hazledine.
21. Effective Protection in Poultry Processing
Research contract undertaken by R.M.A. Loynes and J. Mayi, Department of Agricultural Economics, University of Manitoba for Economics Branch, Agriculture Canada.

22. An Analysis of the Structure, Conduct and Performance of the Sugar and Sweetener Industries

John Berry, Economic Research Branch, Anti-Inflation Board.

Completion by February, 1978.

DISTRIBUTION

1. The Halifax Gateway Study

Feasibility study of manufacturing container transporters in Nova Scotia and expanding Halifax as a distribution centre with a view to servicing the New York market.

Undertaken by Arthur D. Little Consultants Ltd. for D.R.E.E. and Nova Scotia government.

First phase completed.

2. The Distribution System in the Maritimes

Study undertaken by Transport Canada, the Maritime potato industry, P.E.I. and New Brunswick provincial governments, C.N. C.P. rail and D.R.E.E.

First report completed in August, 1977, second report by March, 1978.

3. An Analysis of Transportation of Goods (including food) into Newfoundland

To be funded by D.R.E.E. and Transport Canada. Project still in the conception stage.

4. Milk Transportation Problems in Ontario

Analyzes the possibilities of adjustments being made within transport firms, and changes in the O.M.M.B.'s transportation policy to minimize milk transport costs.

Funded by O.M.M.B., to be completed by late 1978 (Master's thesis).

D. S. Lane and P. Anandajayaskeram.

5. An Analysis of the Marketing System for Food in New Brunswick

A review of food production, marketing (including the role of supply management) and the position of consumers in New Brunswick.

Currently, at the printers. Undertaken by Agricultural Resources (a study group funded by the N.B. government).

6. A Statistical Approach to the Whole Distribution Process

On how to measure productivity in the distribution sector of varied industries (including food). Report carried out in conjunction with the Retail Council of Canada (i.e. shared funding).

Completion in November.

Distribution Services Branch, Federal Department of Industry, Trade and Commerce, Ottawa.

7. Productivity and Costs of Operation in the Grocery Industry

A monthly study of distribution, warehousing costs, etc. carried out by Dartz-Postl and Associates Limited (independent consulting company) for the Canadian Grocery Distributors Institute (Montreal). Released to members on a regular basis. The C.G.D.I. plan to embark on a wider scale research programme regarding costs of operation, etc. in the grocery industry. Waiting for approval from board of directors.

GENERAL

1. How the Montreal-Alberta Beef System Works

Undertaken by the Agricultural Economics Research Council (Pat Moncrieff) for Alberta Cattle Commission.

Completed September, 1977.

2. The Potential for Box Beef

Undertaken by the Agricultural Economics Research Council (P. Moncrieff) for Food Systems Branch, Agriculture Canada.

Completed September, 1977.

3. Marketing Implications of Extended Jurisdiction for the Canadian Fishing Industry. Phase 1: Global Supply and Demand Assessment for 1985.

Undertaken by the Fish and Fish Products Division (Ishiguro), Agriculture, Fisheries and Food Branch, I.T. and C., and Department of Environment (Crerar). Phase 1 completed, research continuing.

4. Special Report for the Bryce Commission Inquiring into Supposed Monopolistic Strengths of Weston's.

Concludes that Weston's has been poorly managed.

Completed and should be published shortly.

Don Tigert, Burns-Fry Ltd., Toronto.

MARKET DEVELOPMENT/PRODUCT DEVELOPMENT

1. Consumer Eating Habits and Fast Food Requirements for White Beans

Ontario White Bean Producers Marketing Board are inviting proposals to investigate the above. Hope to start research in the new year.

2. Utilizing Pork Products and By-Products, and Dairy Products in Newfoundland

To be undertaken by the Newfoundland Development Corporation and Memorial University. Estimated completion date, March, 1978.

3. A Consumption Pattern Study on Canned Food, Bottled Food and Some Frozen Foods

Undertaken by Newfoundland/Labrador Development Corporation and Memorial University (Jim Barnes).

To be completed shortly.

4. The Marketing Possibilities for a Fish-Chip Snack Food

New product research funded and undertaken by the Nova Scotia Research Foundation (Nickerson).

Completion by end of the year.

5. Measurement of the Effectiveness of the O.M.M.B. Promotional Campaign

On-going consumer market research carried out by independent consultant for the O.M.M.B.

6. Consumer Awareness Of and Attitudes Towards Apples and Apple Products

Current research project at the conception stage.

Agriculture Canada and Canadian Horticultural Council.

VII. HOW SHOULD THE PROPOSED RESEARCH BE CO-ORDINATED?

Seven critical research areas have been identified in this study. At the outset, it should be made clear that these research requirements will not be satisfied in one fell swoop. Progress will be incremental. Further, the distinction should be made between demand research and planned research. The former is research that is initiated in response to problems of the moment. Thus, it is generally re-active, ad hoc and short-term in nature. Obviously, it is difficult if not impossible to predict the requirements of such research in advance and, therefore, overall co-ordination of demand research is infeasible. The latter, on the other hand, is generally long-term in orientation, has a wider policy perspective and, frequently, comprises an inter-related series of research undertakings directed towards a major policy goal. It is only planned research that is amenable to continuing co-ordination.

One strong requirement that emanated from the survey of on-going research was the need for a continuing inventory of economic and market research on the P.D.R. sectors in Canada. Clearly, it is necessary to know what research is being undertaken across the country before any attempt at co-ordination even can be considered. It is recommended that the Agriculture, Fisheries and Food Products Branch of the Federal Department of Industry, Trade and Commerce should undertake the information collection function. This branch has close contacts with food industry trade associations; it is better placed to liaise with provincial departments of industry and commerce (from which provincial market studies are initiated) than other federal departments; it has industry officers representing all commodities and sectors of the food system past the farm-gate who, potentially, are well positioned to keep apprised of proposed

research projects; and it has a national rather than a regional perspective of the P.D.R. sectors of the food industry.

The intent of an inventory system would be to have all economic and market research relating to the P.D.R. sectors from both public and the private agencies entered, on computer, into a data base on a project basis. (A research project might be defined as a planned piece of work with clear objectives, capable of attainment in a reasonable length of time and suitable for separate reporting or publishing.) A general updating of the inventory would be required perhaps two or three times a year, although researchers would be encouraged to add projects to the inventory as they are initiated.

Once established, it is anticipated that such an inventory system would require approximately 2 man-months of middle management time (say, at CO 3 level) and 4 man-months of clerical support time (say, at CR 4 level). The latter, of course, would be responsible for servicing requests for information on on-going research. It is recommended that prior to the establishment of an inventory system, an inventory committee should liaise with the Canadian Agricultural Research Council which, relatively recently, has established an inventory of agricultural research and development, to discuss the preferred routes and potential pitfalls in establishing such a system.

It would seem axiomatic that all federal departments with an interest in economic and market research on the P.D.R. sectors would benefit from the exchange of information on relevant proposed and on-going research projects. However, at present there would seem to be little co-operation in this respect. If the federal government is to show leadership in co-ordinating research on the P.D.R. sectors it is suggested

that a first step would be to improve the research information exchange process within Ottawa. It is recommended that the Inter-Departmental Committee on the P.D.R. sectors undertake to place 'on-going research' as a regular item on the agenda, and to encourage the general policy of research information exchange between departments.

A large proportion of the relatively limited funds^{1/} available for economic research on the P.D.R. sectors are expended by five federal government departments (C.C.A.C., I.T. and C., Agriculture Canada, Supply and Services, Fisheries & Environment Canada). These funds are generally applied to demand research. It is unrealistic to assume that the relevant departments should agree as to the apportionment of funds for demand research among specific research areas and topics. Such a loss of departmental sovereignty on research policy would be both politically untenable and, indeed, probably undesirable. However, it is realistic to assume that these departments should agree as to the general research areas and research priorities for planned research on the P.D.R. sectors. As important, it would seem desirable that representatives of the P.D.R. sectors themselves should have an input in the direction of such economic research.

In Section II of this study, a series of arguments were delineated which specified why research should be undertaken on the P.D.R. sectors. If these arguments are accepted, then a pool of research funds would be necessary to undertake a programme of planned research on the P.D.R. sectors. Realistically, such funds initially would only be forthcoming

^{1/} Relative to say funds available for agricultural economic research.

from the Federal Government. In the longer term, associations representing the interests of participants in the P.D.R. sectors may be convinced that an on-going programme of planned research would be in the direct interest of their members, in terms of increasing public understanding of and encouraging public confidence in the operations of their sectors. If such was the case, joint government-industry funding might be possible. Indeed, if participants within the P.D.R. sectors contributed one per cent or even less of the monies that currently they expend on media costs alone for national T.V., radio and the press (such expenditures were about \$140 million in 1976), then sufficient funds would be available for a substantial continuing planned research programme without the need for any contribution from government.

If such funds are made available, it is recommended that a single body be established with responsibility for co-ordinating planned economic research on the P.D.R. sectors, and with the mandate to apportion research funds (perhaps via Treasury Board) among government departments, universities, research groups, independent consultants, etc. in a manner that would best achieve the agreed goals and objectives of a planned research programme.

Such a body might be called the Council for Economic Research on Food Processing, Distribution and Retailing. The Council should meet frequently and Council members should include all key groups with a direct interest in economic research on the P.D.R. sectors, for example:-

- representatives of the Federal Departments of Industry, Trade & Commerce, Consumer & Corporate Affairs Canada, Agriculture Canada, Fisheries & Environment Canada
- a representative of the food processing/manufacturing sector
- a representative of the food retailing sector
- a representative of the Economic Council of Canada
- a representative of the Consumers Association of Canada
- a representative of universities. To provide a direct link with the research inventory system, the officer responsible for managing such a system could act as Secretary of the Council.

It would be essential that the Council view its role in directing planned research within a long-term food policy framework. To this extent, research funds should be directed along two distinct avenues. First, funds should be directed to initiate research in some or all of the seven critical areas identified in Section III of this report. Second, funds should be 'invested' in selected universities to stimulate the development of research expertise on the P.D.R. sectors in the future. Such investment might take the form of funding professorships in 'the economics of food manufacturing and/or food retailing'.

It is obvious that the level of funding required to finance a programme of planned research would depend on the intensity and comprehensiveness of the research effort. However, it is likely that an annual sum of at least \$400,000 would be required to finance both a minimal commitment to the recommended research activities over the investment in

the development of future research expertise. It should be stressed that the planned research programme would require an annual commitment of funds if the longer term research objectives are to be achieved. Indeed, given that the aggregate level of research knowledge and expertise is at such low levels, it is recommended that at least a five-year programme be implemented.