Canada Commerce

March 1984

Canada Commerce is 80 Years Old

ONTARIO INDUSTRY

Canada Commerce

The Honourable Edward C. Lumley
Minister of Regional Industrial Expansion

The Honourable David P. Smith
Minister of State for Small Business and Tourism

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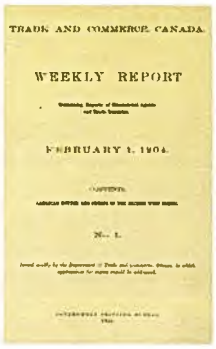
Cover: Ontario's Niagara Institute an organization dedicated to bringing business, union and government together.



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Regular Features

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Business Review

Honeywell Plans Acquisition, Joint Venture in Korea

Honeywell Inc. of Willowdale, Ontario, has signed a letter of intent to acquire the assets of its distributor in the Republic of Korea, Hyundae Engineering Co., Ltd. of Seoul. Hyundae has distributed Honeywell residential, commercial and industrial control products since 1963.

Honeywell has also agreed to form a joint venture with The Lucky-Goldstar Group of Korea, principally to market and install commercial-building and industrial systems in Korea.

A Honeywell spokesman says the agreements reflect the company's strategy to achieve a greater presence in the growth areas of the Asia-Pacific market.

Cold Weather Sets Peak Power Demand Record

Cold weather caused a record peak demand on the Ontario Hydro system of 18.8 million kilowatts on December 21. The previous record high of 18.1 million kilowatts was set in January 1982 while the December 1982 peak was 16.9 million kilowatts.

Ontario's energy consumption increased by more than 20 per cent in December to about 10.7 billion kilowatt-hours. This compares with about 8.8 billion kilowatt-hours in December 1982.

Document Outlines Export Opportunities in France

A reference document identifying export opportunities in France by industry sector and outlining the trade promotion support planned by the federal government over the next two to three years, has been published by the Department of External Affairs.

Canada's Export Development Plan for France was prepared for Canadian firms exporting to France for the first time and for companies seeking to expand their share of the French market. It also presents success stories of Canadian firms doing business in France and provides a guide to relevant market considerations and competition.

Copies of the 42-page report are available in English and French from the Department of External Affairs, Ottawa, Ontario K1A 0G2.

Snowsuits to Africa? That's Salesmanship

Selling refrigerators to Inuit has become a big business in the Canadian north. But how about the reverse twist — peddling snowmobile suits in Africa?

For J.-C. Joly, commercial officer in the Ontario regional office of the Department of Regional Industrial Expansion (shown modelling one of the suits), it was just another day's work while leading a successful trade mission to Tunisia and Cameroon. During a stop-over in Douala, Cameroon, Joly heard that workers in local cold-storage plants were finding safari suits a bit less than ideal for labouring in the freezers. Voilà! He put the Douala management in touch with Canadex in Scarborough, leading to negotiations for 60 tropics-bound snowsuits.

Loran-C Charts for All the Great Lakes

A chart enabling recreational boaters to use Loran-C radio navigation in Georgian Bay will soon be on sale, according to the Department of Fisheries and Oceans.

Completion of the Georgian Bay chart means that this year, for the first time, Canadian charts with Loran-C lattices will be available for all the great lakes. Loran-C (*LO*ong *RA*nge *N*avigation) is a radio-navigation system using shore-based transmitters and shipboard receivers for precise determining of positions.

University Students Set Up Student Employment Service

The students of Queen's University in Kingston, Ontario, have established a unique placement service for students — the Queen's Summer Employment Program (QSEP).

Established a year ago, QSEP is a year-round, 24 to 48-hour résumé referral service on qualified, available students. It is designed to match students in all fields of study with employers across the country at no cost to either the students or employers. It provides employers with a fast, efficient system of securing qualified summer students. For further information, contact: Queen's Summer Employment Program, Queen's University, Kingston, Ontario K7L 3N6; Tel: (613) 547-2992.

Major Projects Procurement Policy

The Saskatchewan government has recently announced a Major Projects Procurement Policy designed to increase the benefits to Saskatchewan and Canada from major capital projects undertaken in the province.

The policy encourages developers of major projects to make best use of competitive Saskatchewan suppliers of goods and services in all project phases, from design through construction to ongoing operation.

Industrial Strategy Imperative

In a recently released Science Council of Canada background study, *The Challenge of Diversity: Industrial Policy in the Canadian Federation*, Dr. Michael Jenkins warns that Canada's inability to harness the growing regional diversity of the economy may place Canada at a serious competitive disadvantage in the future. He made recommendations for implementation of a highly important industrial strategy.

Federal-provincial co-operation is essential, Jenkins suggests but he recommends that the federal government take a bold leadership role in framing such an imperative industrial strategy to provide a national context for provincial policies. The study further recommends that the federal government tailor its industrial strategy to the needs of specific regions of the country.

Niagara Structural Steel Becomes TecSyn International

A respected name in the Canadian steel industry, Niagara Structural Steel (Canada) Ltd., has ceased to exist. In its place a new Canadian company has been born — TecSyn International Inc.

Worldwide diversification of TecSyn has meant making a successful transition from a cyclically vulnerable, steel-related industry to the high growth business of synthetic technology. The name TecSyn is short (and reversed) for synthetic technology and reflects the company's new directions.

Niagara Structural Steel, which has been operating in Canada since 1948, decided to adopt the new name in response to major changes in its business operations. The company has been evolving from a steel company serving Canadian and U.S. steel markets into a diversified multi-million dollar enterprise operating in international markets on a broad product line.

Spar Wins Export Award

Spar Aerospace was one of a number of Canadian companies honoured by a Canada Export Award at recent special ceremonies in Montréal. The company, which received a large Canada Export pennant, won the award for its Satellite and Aerospace Systems Division's Brazilsat program.

The newly established Canada Export Award recognizes outstanding achievement in exporting Canadian products.

CANADA LINE Container Service Inaugurated

The newest container shipping line on the North Atlantic began service recently when The Canada Line's Dart Europe loaded 1 800 containers bound from Montréal to the European ports of Felixstowe, Le Havre, Antwerp and Hambourg. To commemorate the event, Port of Montréal Corporation Chairman Roméo Boyer (right) presented a plaque to Harvey Romoff, chairman and chief executive of The Canada Line (left).

A new company formed jointly by CP Ships and Dartcan, The Canada Line will be the leading cellular container shipping company on the North Atlantic between Canada and Europe.

Hydro Ontario Generating Plant

Ontario Hydro will start up a new 200-megawatt generating station at Atikokan by December 1984, it was announced recently.

The announcement ended speculation about the fate of the new facility which has been under construction since 1978. Two 200-megawatt generating units were originally planned for the station but Hydro Ontario indefinitely shelved one of them a year ago.

The Atikokan station, located about 200 kilometres northwest of Thunder Bay, will employ 60 people and operate 16 hours a day.

Free Advertising for Canadian Exporters

Free advertising for Canadian companies seeking new markets abroad is now available through the International Business Exchange (IBE) monthly news letter in its *Products Available for Export* section. IBE will accept camera-ready display ads, 2 × 3½ inches in size.

Founded in 1982, IBE is a multinational organization which assists international traders in finding the business contacts they need.

Canadians Are Savers

Christmas is the time of year when Canadians spend a lot of money but, when the holiday season is over they often feel a little guilty about the amount spent on gifts and parties. And yet, Canadians are among the most saving people in the world.

Canadians save more of their income than Americans, Australians, British, French and Japanese, according to Statistics Canada's publication *Inklings*. In 1981 well over 12 per cent of Canadians' paycheques was salted away to the tune of $28 billion!

Where is it all put?

Almost $30 of every $100 saved was held in chartered banks. The next $20 went into pension plans and $12 in a life insurance fund. The rest of those savings were spread around in trust companies, credit unions and investment funds. The least popular place for savings is trust company retirement savings plans which received only 20 cents.

New "Government of Canada Awards" Productivity, Innovation and Design

"To provide recognition for outstanding Canadian achievements in improving the competitiveness of Canadian industry, and to recognize talented young Canadians."

The above quotation describes a new and comprehensive system of awards for outstanding achievement established by the federal government and designed to draw national and international attention to productive and innovative Canadian companies.

Over the past decade or so there has been a significant increase in the pace of technological change, in the reliance of industrialized nations on innovation as a source of their comparative advantages and, as a result, an increase in competition for international markets.

The Government of Canada Awards for Excellence in Productivity, Innovation and Design will be administered by the Department of Regional Industrial Expansion (DRIE) and the first presentations are scheduled to be made on May 25 in Toronto. The location will change each year.

Designed as prestigious vehicles of recognition, the awards, the publicity surrounding them and the ability of the winners to identify themselves as having won awards, are all expected to help the winners promote themselves and their achievements.

In addition, the program will help heighten domestic awareness of new technologies and innovations — including productivity, design innovations and methods of improving labour/management relations and their benefits. This, in turn, will encourage other Canadian companies to improve their products, processes and services.

The new awards program will complement existing awards such as the Canadian Export Award; the Natural Science and Engineering Research Council's Stacey Award for post-graduate engineering and science research; plus several Governor General Awards including the Schreyer Award for Consulting Engineering.

There are three categories of awards: Productivity Awards; Innovation Awards; and Design Awards.

GROUP A — PRODUCTIVITY AWARDS

This group reflects the importance of productivity in business and industry and how new technology affects the co-operation between management and labour. The awards recognize achievement in a broad spectrum of engineering, production, management practices and labour utilization. The awards are:

- THE PRODUCTIVITY AWARD for Significant Achievement in Productivity.
  The award would recognize advances in production engineering as well as productivity improvement through such means as improved management practices and production rationalization through use of world product mandates, etc.
- THE LABOUR/MANAGEMENT RELATIONS AWARD for Co-operative Implementation of Technological Change.
  This would recognize management of technological change from the perspective of social and human impact and would be given jointly to labour and management.

GROUP B — INNOVATION AWARDS

The awards of this group highlight outstanding achievements in the development, transfer and application of new technology and innovation. They draw attention to the importance of technology and innovative techniques to the competitiveness and success of Canadian industry. The awards are:

- THE INNOVATION AWARD for the Innovative Application of a Technology.
  The award would be made on the basis of the innovative use of technology to solve practical problems or the incorporation of technology into new products or processes. Only companies would be eligible to enter.
- THE TECHNOLOGY TRANSFER AWARD for the Transfer of the Results of Research and Scientific Activities to Industrial Utilization.
  This award would increase recognition of the importance to Canadian industry of the transfer, adaptation and commercial exploitation of new technology. Eligible nominees would be industry, university or private sector scientists and engineers and government agencies.
- THE INVENTION AWARD for Technical Merit.
  Entries for this award would be judged in terms of the significance of the technological breakthrough of an invention. Entries would have to have at least reached the working model or prototype stage and would have to exhibit significant market potential. Recognized research establishments as well as companies would be eligible.

GROUP C — DESIGN AWARDS

This group highlights achievements in the design and business development sector and gives recognition to excellence in the design of products, design services, marketing and business development. The awards are:

- THE MARKETING AWARD for Innovative Marketing of a New Product or Process.
  Eligibility for this award would be restricted to companies, incorporated or unincorporated, which have successfully and innovatively exploited an undeveloped market through innovative marketing and creative design intelligence.
- THE ENTREPRENEUR AWARD for Outstanding Achievement in a Small and Medium-Sized Business.
  The award would recognize a small or medium-sized business operating in a particularly innovative manner, showing flexibility and adaptability.
- THE YOUNG CANADIAN AWARD for Scientific and Design Talent.
  Canadian students in grades 11 to 13 inclusive would be eligible to submit designs or scientific research papers. Participants would be limited to one design or model which would be endorsed by a senior instructor.

General Information

Some of the categories will be open to competition while in others, such as the Labour/Management Relations and the Inventions Awards, companies will be nominated or specifically requested to enter. Deadline for all entries for the 1984 awards is April 13 and companies interested should contact the nearest DRIE Regional Office or the Awards and Design Directorate in Ottawa — Tel: (613) 992-4496 or 992-5006.

Relaxed atmosphere for Niagara Institute.

Idyllic Setting for Unique Institute

The Toyotas, Chevettes and K-Cars seem strangely out of place and time with the general store, chemist shop and other carefully restored historic buildings that both create and rest comfortably in the 19th century atmosphere of Main Street, Niagara-on-the-Lake.

A leisurely, five minute stroll away is one of Ontario's first brick houses. Built in 1793, destroyed by fire in 1813 and rebuilt in the 1850s, this stately home was purchased in 1905 by the eminent American banker George Rand who named the house Randwood. Later he built a second house on the property for his daughter, Evelyn, which today is called Devonian House. Surrounded by five hectares (13 acres) of landscaped gardens, the structures and grounds create a quiet, rural escape from the cold concrete and noisy hustle of the modern city.

Modernized and renovated this gracious, almost 200-year-old estate now serves as home for the Niagara Institute. Founded in 1971 through the efforts of its first president Calvin Rand, the Niagara Institute does no research, does not publish and states no opinions. What it has done is establish a significant reputation as a non-partisan forum for bringing together Canada's senior business, union and government leaders.

According to Lyle Makosky, Niagara Institute vice-president, it is an organization that is "process oriented", dedicated to leadership development and mutual understanding in the search for a more coherent society.

The Institute has four stated objectives:

- To encourage approaches to decision making founded upon an understanding of human values.
- To enhance the ability of leaders to anticipate, understand and respond to critical problems.
- To bridge gaps in perception and communication which separate important parts of the community.
- To strengthen the capacity of our institutions to adapt to change.

These objectives are pursued through a variety of programs all of which are designed to take advantage of the elegant but informal atmosphere that invites reflection and an open exchange of ideas. These programs currently fall into three major categories.

FORUMS are offered, by invitation only, primarily to chief executive officers, deputy ministers and union presidents. Short but intensive sessions, they are "off the record" and deal with current issues related to Canada's economic development options, international issues or simply specific matters of common concern to business, government and labour.

Face to face dialogue with leading world figures is an important feature of a new program called Executive Briefing. Helmut Schmidt was the resource person at the first such forum and William Brock, President Reagan's chief advisor for international trade negotiations, the featured guest at the second.

Publicly offered *LEADERSHIP AND DEVELOPMENT PROGRAMS* are directed at senior executives and managers. Lasting up to seven days, various seminars provide participants opportunities to explore and understand leadership, organizational change, and the values, perceptions and operations of other sectors in our society.

The Institute also offers, on a contractual basis, *CLIENT SERVICES* which are programs designed in concert with an organization to meet its specific developmental needs or address a particular issue. Organizations as varied as IBM, Air Canada, the United Steel Workers of America and the Anglican Church of Canada have all had custom tailored programs provided. The approach is not prescriptive. No solutions are offered. In the words of a Niagara Institute brochure, "our purpose is to

help you develop an independent capacity to learn and decide, in keeping with the values and objectives of your organization".

Each and every one of the foregoing programs is based on the belief that, through learning, dialogue and reflection, people can change themselves and the world they live in, and if such interaction and understanding can be promoted among Canada's decision makers, not only will they and their organizations benefit but in the process society as a whole will be improved.

All of this may appear idealistic but, in truth, it is an idealism heavily tinged with reality. In excess of 100 organizations, including major corporations, unions and federal and provincial governments, demonstrate their commitment to the ideals of the Niagara Institute in a very tangible way. Along with program fees the Institute, as a non-profit, independent organization, relies on its membership fees and direct contributions for support.

Financial underpinnings are important, but it is the human resource that delivers an organization's goals, and this is certainly true of the Institute. The staff is small, 21 in total. The professional staff numbers only eight, including the president, vice-president and four program directors.

These individuals bring a particular expertise and viewpoint to the Niagara Institute. Allowed an unusual degree of autonomy while drawing on backgrounds ranging from academic to government and business, they play an important role in shaping the Institute's programs as they, in turn, are shaped by the Institute. This distinct absence of traditional bureaucratic process allows the group to respond and adapt quickly to the needs of its clients while drawing on an extensive network of resource guests who quite simply are among the most experienced and respected in Canada and abroad.

And what of the more practical requirements of participants? Randwood can handle groups of up to 35 people; Devonian House, 20. Overnight accommodation is available at two excellent hotels, both within walking distance. On-site meal and beverage service, audio-visual equipment and telephone service are provided by the Institute. Nor have recreation and sports been forgotten. There is a tennis court on the grounds and access to a wide variety of nearby sports and leisure facilities.

Healthy, dynamic organizations change and evolve and during the past year the Institute has taken stock of its accomplishments and how it might best retain its relevance to leaders in Canadian society. As a result, its Board of Directors has approved a new emphasis that will mean more "consultative" style programs involving key leaders in a major issue. Developmental seminars, while important, will be reduced.

Stately Randwood House, set in well-groomed grounds, makes a perfect setting for the Niagara Institute.

The aim will not necessarily be to find solutions, but to foster a greater empathy and understanding through a frank exchange of views. In addition, "the international dimension of the Institute programs, while always a part of its activity, will also be expanded," said Terry Mactaggart, Institute president.

New programs being offered include "the Media", a forum for the most senior heads of organizations, with resource persons such as Peter Newman, Tom Kent and Charles Lynch; and "Federal Government Operations For Foreign Executives", intended to improve their understanding of the Canadian government's policies, objectives and operations.

In the words of Bill Wilton, director of Corporate Government Programs: "They will have a chance to meet more key players in three days than in a year of living here."

A third new program, entitled "Wealth", will explore the challenges and trade-offs in creating and distributing Canada's wealth. It is a program which explores human values by focusing on a specific issue.

After spending a number of hours at the Niagara Institute, absorbing its very special atmosphere and exchanging thoughts with an obviously enthusiastic, dedicated staff, this writer made the comment that the Institute seemed more like an idea than an organization. Elizabeth Katz, the centre's communications director, looked mildly surprised, smiled and with obvious satisfaction replied, "That's indeed the ultimate compliment you could pay us, since we ourselves make that claim in describing the central concept guiding our seminars."

It is a claim well founded.

— by Barry Mitchell
Communications Branch DRIE

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Energy Management on Canadian Farms

As the world's population soars, driving up the global demand for food and putting more and more pressure on the world's food supplies, Canadian farms have been using increasing amounts of energy in helping to meet these needs.

Agriculture is extremely energy-dependent, relying heavily on crude oil not only for motor fuels but also for fertilizers and agricultural chemicals. In fact, agriculture's vulnerability to energy cost increases has never been more important.

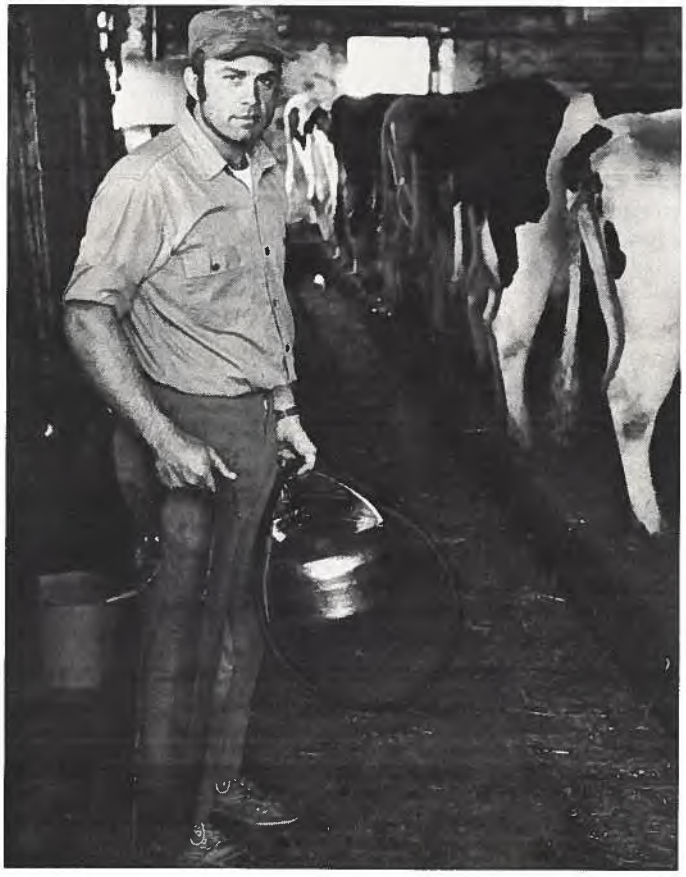
The high proportion of farm expenditures taken by direct and indirect energy costs suggests that there is plenty of scope for savings. Such costs account for approximately 36 to 46 per cent of a typical Prairie grain and oilseed farmer's operating expenses; 42 to 48 per cent for those of a typical central Canadian corn producer; and 38 to 40 per cent for a typical Maritime potato farmer.

Sensible approaches to monitoring a farm's energy use, in what Alvin Toffler calls "the post industrial age" in his book *The Third Wave*, are being investigated by a government Farm Energy Management Task Force. This task force, a joint venture between producers and government, is trying to find ways of bringing down the $3 billion plus tab for direct and indirect energy use on Canadian farms.

The Canadian Federation of Agriculture (CFA) is the leading organization in the task force and funding is supplied by the Department of Energy, Mines and Resources (EMR), as part of EMR's Energy Management Task Force Program, and by Agriculture Canada.

According to CFA economist Dr. Marjorie Bursa, one of the priorities of the task force is to persuade the Minister of Agriculture to establish what she calls "the Canada Farm Energy Service" which would be similar to the existing Canada Farm Plan. The new service would provide farmers with energy consumption standards by representative farm types in various regions so that individual farm operators would be able to evaluate their performance against a "norm".

Other task force priorities include: increasing the availability of information about farm energy management practices which are economically viable in the short term; identifying constraints to further energy efficiency gains in agriculture and working towards their removal through research and extension; monitoring trends in farm energy purchases by quantity and cost; and encouraging exchanges of farm energy information among provinces.



Efficient milking methods save energy.

As a part of the information exchange program a seminar was scheduled this month in Ottawa for farm energy specialists from the provincial governments as a forum in which to discuss farm energy management technology. According to a CFA spokesperson, it was hoped this would set the pattern for continuing information exchanges.

The task force approach has helped industries such as food processing cut energy use by as much as 20 per cent in five years. Agriculture Canada has estimated that, by making better use of existing energy management technologies and practices, farmers could realize a 20 to 30 per cent reduction in direct and indirect energy use, adding up to savings of some $600 million a year for liquid fuels, fertilizers, electricity and chemicals.

In fact, considerable progress has already been made. A recent survey by Statistics Canada shows that between 1978 and 1981 an estimated 80 000 farmers increased vehicle and machinery maintenance to improve energy efficiency. Insulation was added to almost half the 244 000 farm houses in Canada and to approximately 40 000 farm buildings.

Perhaps even more significant is the fact that increasing numbers of farmers are saving fuel and conserving soil with minimum tillage methods.

Research has proved that by disturbing the topsoil, which contains the nutrients essential to plant growth, soil erosion results and there is therefore a need for more fertilizers, additional tillage to prepare a good seedbed, and reduced water infiltration and storage. Yields are reduced resulting in an increased energy use. Careful management, therefore, decreases soil erosion and reduces

Gasoline-diesel conversion saves on the amount of fuel needed to do farm work.

indirect energy expenditures through more efficient use of pesticides and fertilizers.

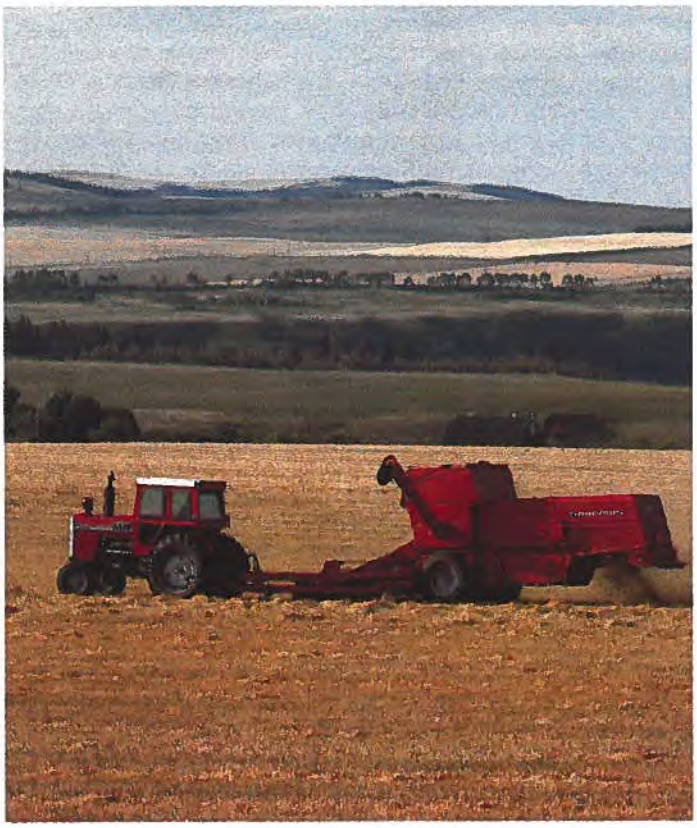
An example of ways to cut energy use on the farm would be changing the method of drying grain, a major portion of energy costs for many farmers. A dryer operating at an ambient air temperature of minus 10 degrees Celsius consumes nearly 50 per cent more fuel than when air temperature is plus 10 degrees Celsius. This means that early fall drying is better provided, of course, that crop conditions permit it.

When it comes to farm equipment, small things waste fuel such as pulling less than the maximum drawbar load. Savings of from five to 10 per cent are possible by better equipment handling, operation and maintenance.

Research in the United States shows that variations in the number of separate field operations can cause fuel consumption to vary between 2.3 and 17 litres (0.6 and 4.5 U.S. gallons) per acre. In field operations, it has been found that fuel consumption can be reduced by working in the longest direction possible, or by using an around-the-field technique. Turning on headlands can represent 10 per cent of total fuel consumption.

Other conservation opportunities are to be found in space heating, insulation and ventilation in livestock production. Heat exchangers which recover animal heat can replace supplemental heating in well-insulated barns. The heat recovered by the use of heat exchangers from ventilation exhaust of a farrowing barn has been measured to be 33 per cent of the total heating load.

Significant increases in energy efficiency can also be made in crop production. It is well known that a diesel engine requires about ¾ of the fuel it takes to perform the same work with a gasoline engine. And zero tillage research has shown energy savings in the range of 60 per cent over conventional methods. While weed control and stubble planting still pose problems, the depth and frequency of tillage operations should be reduced to the minimum at which crop yield can be maintained.



It is only by conserving energy and by substituting alternate fuels for crude oil products that farmers will be able to improve productivity, thereby remaining competitive. The Farm Energy Management Task Force, an example of co-operation between private and public sectors, shows farmers how this can be done to best advantage.

— by Susan Hallett
for Energy, Mines and Resources

The Payoff from World Product Mandating in Canada

To mandate or not to mandate — that is the question. It is not a question that William Shakespeare or any of his contemporaries had to deal with. Indeed, it is not a question that Canadians had to deal with until a few years ago.

Even if one had added the prefix "world product" to "mandate" it would have meant no more to Canadians of a generation ago than it would have meant to Shakespeare. Yet in today's complex world of technology-intensive industries with companies that sometimes operate as multinationals and sometimes as transnationals, it is a question of paramount importance to a broad cross-section of Canadian society. It is one that warrants even more study than it gets at present.

What Is a "World Product Mandate"?

First of all, "world product mandate" is a term used to describe an agreement between the Canadian subsidiary of a foreign-based corporation and the parent corporation. It gives the subsidiary full responsibility for all activities related to the supply of certain products or services to the world market.

There are several variations of this concept that are not world product mandates but that can lead eventually to them. For example, the Canadian subsidiary may use the parent company's worldwide sales force as its primary channel of distribution.

The subsidiary may even use one or more of the parent company's plants as a source of product, particularly where the economies of scale do not justify duplication of a product line in Canada. In addition, its products could be exported only to a limited number of countries.

It is generally understood, however, that a world product mandate includes primary responsibility for the development and exploitation of the product or products and the technology on which they are based. It also includes the operation of a worldwide profit centre within the Canadian subsidiary based exclusively on these products.

It is important that a distinction be clearly made between a "multinational" corporation and a "transnational" corporation because that distinction can often figure prominently in the question of whether to mandate or not.

A multinational corporation is one that follows the traditional pattern of allowing each subsidiary to build the necessary local management infrastructure to carry out the mission assigned to it whether in sales, manufacturing, service or whatever.

A transnational corporation, on the other hand, is one that relies much more heavily on its head office support functions to assist its subsidiaries in carrying out all but its main corporate mission in the various host countries.

Before proceeding, it might be interesting to put the whole story of foreign ownership and world product mandate into historical perspective.

Looking Back

In today's consumer-oriented, technology-intensive society, most Canadians automatically equate the term "foreign ownership" with Canada's secondary manufacturing industries. It may surprise the average Canadian that foreign ownership of this sector is a relatively recent phenomenon. It did not happen until after World War II.

That is not to suggest that Canada was not a consumer of manufactured goods prior to that. In fact, as early as the mid 1800s, Canadians were among the world's most prolific users of the products of the industrial revolution — steam engines, farm tractors and textile machinery.

The first real opportunity for foreign-controlled firms to enter Canada's secondary manufacturing industries probably occurred in the latter part of the 19th Century with the emergence of a farm implements industry. At the same time, Canada built its own farm implements and protected them with high tariffs. A few years later, it built its own railway industry, armaments industry, and the list grew.

As recently as the 1920s, most foreign ownership was concentrated in the resource sector and attracted little political attention. In fact, Canadians praised the foresight of the American business people who built the mining industry in Northern Ontario and the aluminum smelting industry in Northern Québec.

Clearly, the technology-intensive, foreign-owned companies that have arrived on the scene since World War II are different entities than the mining, lumbering and smelting companies that descended on Canada in the 1920s and 1930s. They are also very different than the various service companies (e.g. credit card companies, fast food companies, banks, etc.) that are still descending on the country.

The basic difference is that the primary motivation of a high technology company is to operate the Canadian subsidiary as a sales office whereas the resource industries, by the nature of the product or service provided, have no choice but to use Canadian labour and materials in substantial amounts.

The fact of the matter is that Canada has transnationals and multinationals and both can benefit from the challenge of world product mandating.

The Canadian Challenge

Whether they concern multinationals or transnationals, the issues facing Canadian industrial policy makers and, indeed, managers of Canadian subsidiaries of such corporations, are very different today than they were just a few years ago. Yet a number of factors remain unchanged.

First, Canada represents a stable and relatively sophisticated market for technology-intensive products. Because of the unique geographic, climatic and cultural influences on the Canadian market, Canadians are often forced to find new and unique ways of applying foreign technology to their needs.

Such applications are often extremely cost-effective and can lead to new product and market niches that would not have been exploited by the foreign-based parent in its home country.

Example: Burroughs Memorex Inc., the Canadian subsidiary of Burroughs Corporation, developed firmware and hardware for portable modular bilingual keyboards for its computer terminals. These were then exported to French language countries around the world. Similar projects are currently being undertaken for its microcomputers.

Second, Canada has an excellent pool of human resources which if properly used, can contribute significantly to the company's worldwide corporate mission.

Third, Canada also has an excellent pool of home grown technology which, if properly assimilated into technology-intensive products and services, can often increase their lifetime and market potential as well as lead to exciting new variations.

The challenge facing such high technology companies, industrial policy makers and managers of Canadian subsidiaries is really how to create mechanisms that will allow such companies to apply all these Canadian assets to best effect for their worldwide missions and, at the same time, bring the most economic benefits possible to Canada through the local subsidiaries' operations.

The most widely accepted mechanism is the "world product mandate".

While much has been said about the concept, particularly within Canadian government circles, parent companies all too often misread Canadian government intentions. A more in-depth analysis of the potential benefits of such mandates will reveal that the ultimate winner, particularly in the technology-intensive industries, is the company itself. The worldwide exploitation of the technology and market opportunities that are unique to the Canadian environment can represent exciting business opportunities for almost any such firm.

Recipe for World Product Mandating

The first step in implementing a world product mandate is a long-range plan for the subsidiary and the initiative for this must come from the Canadian management team. It is the chief operating officer and his or her immediate subordinates who have the most to gain from a world product mandate and if they are worthy of being called managers they have an obligation to their parent company to have a long-range plan in place at all times — even if the parent company has not asked for it. In the majority of cases, the plan should at least address the issue of a unique Canadian mission of some sort.

For a technology-intensive company the plan must deal squarely with the issue of how to attract the senior management it will undoubtedly need in order to grow. Many highly qualified managers would be more attracted to working for companies with a world product mandate because there would be a broader choice of career opportunities.

In any event, the benefits of a world product mandate will become very clear during the planning session. While the human resources factor will likely remain a highly prominent one, others such as access to Canadian markets and technology will be uncovered during the course of this important planning process.

The Long-Range Plan

The type of long-range plan required by a subsidiary will depend on a number of factors the most significant of which is the industry it operates in and its stage of maturity. The following is a suggested format for a relatively mature company operating in a high growth, technology-intensive industry.

The main body of the plan should have the usual headings of a typical plan for an on-going operation. One of these headings should deal specifically with the world product mandate as if it were a new business being grafted onto the existing business — which is exactly what it is. As such, it will require a separate plan of its own but its connection with the long-range plan must be clearly made.

Suggested headings for the overall long-range plan include: situation analysis; report against previous plan; statement of objectives; implementation plan; world product mandate; financial projections; and summary.

The world product mandate section, which is really a plan within a plan, should include:

- **Statement of Opportunity** containing a clear and concise statement of the new opportunities the subsidiary wants to pursue.
  Example — a company may want to develop a line of products for capturing television images on paper. The rationale for exploiting this from Canada might be based on gaining access to the unusual videotex capability that exists in Canada, and on the fact that Canada has more cable televisions per capita than any other country.

- **The Product:** A clear description of each product must be given and this requires a detailed investigation of the market.
  Example — Using the same hypothetical situation as above, the long-range product might be a stand-alone device for home or office. On the other hand, an interim product might be a microcomputer and floppy disk that stores TV frames and takes the data to a shared copying facility, since laser copiers are still well beyond the reach of individual consumers.

- **The Market:** This will be the most difficult part of the plan and help should be sought from the parent company in doing the necessary market research. It should provide a complete segmentation of the market, by product, customer, geography, etc., and then the various target markets should be clearly specified.

- **Revenue Projection:** If the target markets are properly quantified and the necessary estimates are made about growth rates, sales projections should be relatively easy to estimate over a five-year period. The importance of good market research and scenario analysis cannot be overemphasized.

Canadian experience with world product mandates shows a sales outlet with a mandate will be more effective.

- **Financial Plan**. This should include the following (each for a five-year period):
  - Profit and Loss — monthly for the first year, quarterly for the second and yearly for the last three;
  - Balance Sheet — quarterly for the first two years and yearly for the last three;
  - Cash Flow — quarterly for all five years;
  - Return on Investment — over the full five-year period.

The Importance of Scenario Analysis

In addition to the above "plan within a plan" for the world product mandate, some attempt should also be made in the main body of the long-range business plan to identify the incremental effect mandating might have on the rest of a subsidiary's business.

The Canadian experience with world product mandates shows that a sales outlet with a mandate will be more effective because of its improved acceptance in the Canadian business community; its endorsement by government bodies; its ability to attract better human resources; its access to research and development facilities of universities and public institutions such as the National Research Council, etc.; and the availability of expertise in exporting from such organizations as the Export Development Corporation.

Since there will be many possible variations on the world product mandate in terms of scope and technology intensity and also in how it relates with the rest of the subsidiary and the parent company, it is useful to provide an analysis of various scenarios. The attached illustrations show the impact of three possible scenarios. It is assumed that the company is currently operating strictly as a sales subsidiary and is proposing that the parent company grant it a world product mandate. The possibilities might be:

Scenario A — a world product mandate for an entirely new venture, relatively high risk, with full responsibility for product development and marketing, with access to a worldwide market using the parent company's sales force.

Scenario B — a limited mandate for a "feeder" product line with a shared responsibility for product development and marketing with a corporate product line and access only to the North American market.

Scenario C — the status quo mandate of the sales subsidiary.

The impact of each scenario is shown as it relates to:

- share of the Canadian market for the product(s) currently being sold and expected to be sold in the future by the "sales subsidiary";
- investment requirements;
- profits;
- return on investment.

FIG. I — SHARE OF CANADIAN MARKET UNDER VARIOUS SCENARIOS EXCLUDING EXPORTS FROM WORLD PRODUCT MANDATE OPERATION

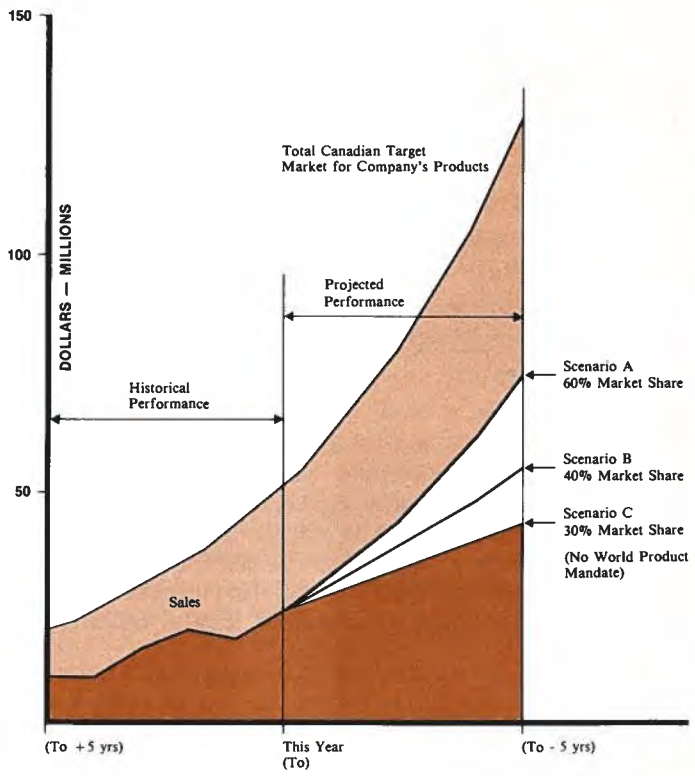


FIG. 2 — INVESTMENT REQUIREMENTS UNDER VARIOUS SCENARIOS (Cumulative)

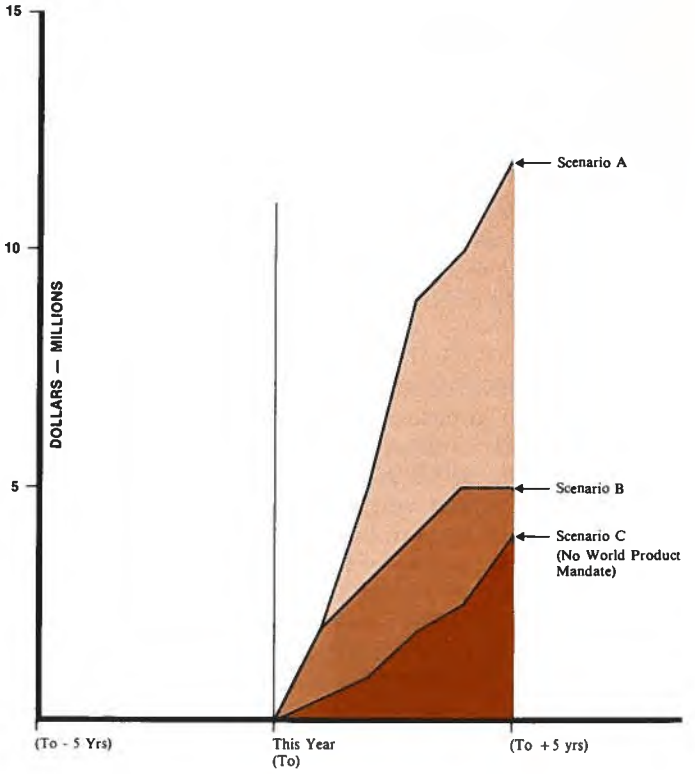


FIG.3 — ANALYSIS OF PROFIT AND RETURN ON INVESTMENT

Return on Investment for purposes of this analysis is taken as the sum of the extra profits from the sales outlet and the present value of the investment in fixed assets at the end of five years divided by the incremental investment required over a straight sales outlet.

SCENARIO A:

- additional profits from sales outlet over 5 years (10% on 80M additional sales) — $8.0 M
- discounted future value of new facility (estimated at 12M) — 12.0 M

Total — $20.0 M

- return on additional investment of 8M (over scenario C investment — see figure 2) — $\frac{20}{8}$ = 250% over 5 years

SCENARIO B:

- additional profits from sales outlet over 5 years (10% on 20M additional sales) — $2.0 M
- discounted future value of new facility (estimated at 1M) — 1.0 M

Total — $3.0 M

- return on additional investment of 1M (over scenario C investment — see figure 2) — $\frac{3.0}{1.0}$ = 300% over 5 years

The return on investment is seen to come not just from the book value of the new facility but also from increased profits from the "sales subsidiary". Figure 3 shows that the increased profits can be almost as great as the discounted book value. This is not surprising but it would not have been uncovered if this scenario analysis had not been done.

The analysis presented here is purely a hypothetical one, lacking in accounting finesse. However, it does serve to illustrate a method of presentation that will make the choices very visible to the subsidiary's owners. The relative magnitude of the returns as suggested in Figure 3 are not out of line.

What it illustrates is that, in addition to receiving its usual return on the incremental investment in fixed assets for the world product mandate, the company will receive a return on its increased domestic market share that can be just as great. Not shown on a five-year analysis is the incremental downstream effect of this extra market share for both the subsidiary and parent.

Why Bother?

Even after going through the planning process, it might still be easy for the Canadian management team to ask: "Why bother?"

There are many reasons why they should. First, they owe it to their owners, the parent company. The prime responsibility of any management team is to its owners and the owners of today's Canadian technology-intensive companies should be aware of a number of factors.

- The Canadian trade deficit in technology-based goods and services currently is running almost $10 billion a year and is growing at about 20 per cent. This is viewed in terms of decreased employment opportunities by the Canadian government. Since so much of this industrial sector is foreign-owned, it is vulnerable to legislation at any time. History teaches that self-regulation is the best form of regulation.

  One obvious method of addressing this problem is unitary taxation — a formula used by some states in the U.S. by which local operations are taxed at their worldwide corporate tax rates. Most foreign-owned technology-intensive firms in Canada today (particularly those that are sales subsidiaries only) pay taxes at a significantly lower rate in Canada than their worldwide tax rate. In view of the precedent set by those individual states, this is a tempting "stick" the Canadian government could use immediately to force the kind of corporate behaviour that would reduce this sector's trade imbalance.

  The Canadian management teams should at least know about these issues because, in the final analysis, their owners are expecting it of them.

- The foreign owners of such firms are invariably receptive to proposals that create new business opportunities such as world product mandates. Many Canadian firms that already have such mandates are under current pressure from their owners to expand or modify their mandates so as to increase both their Canadian market and their worldwide corporate mission. There are many examples of firms that have used the Canadian subsidiary as a testing ground to address corporate problems requiring fast response to unique world market needs.

Example: A world product mandate for the design, development and manufacture of item processing equipment for financial institutions worldwide has been a great success for NCR Canada and its Waterloo, Ontario, operation as well as for Canada. It has brought about significant growth to the company and made a substantial contribution toward the reduction of Canada's trade deficit. The company views the world product mandate philosophy as playing a large role in attaining government objectives such as reduction of "high-tech" trade deficits and continued increases in employment and research and development.

There are also many interesting examples where firms have gained an unusual acceptance into certain key markets as a result of an informal endorsement from government authorities which was based on the companies' high ratings as good corporate citizens.

Example: Westinghouse Canada Inc. produces data communication concentrators and display terminals. Initial development of these products in Canada in the early 1970s received financial support from the then Department of Industry,

Trade and Commerce and they were later installed by the Department of National Revenue (Customs and Excise) and by Air Canada. Support of this nature helped give the Canadian subsidiary high credibility in the foreign marketplace; in excess of 75 per cent of the Canadian production is now exported to a number of countries.

In addition, several firms have senior vice-presidents at world headquarters who have come up through the ranks of the Canadian subsidiary. The attraction and development of such skills would have been impossible without the establishment of a world product mandate within the subsidiary.

• The ultimate corporate objective of any good multinational corporation is to build a company that will last forever — one that will withstand recessions and competitive setbacks and even bad luck. To achieve this objective, a corporate entity cannot be built with all decision making and entrepreneurial challenges at the home office.

Each major subsidiary must be able to build the kind of corporate entity that will attract the very best in Canadian management and technical talent.

In short, the Canadian subsidiary must also last forever. Its ability to do so may depend on the implementation of a world product mandate.

Performance Criteria

Many of the larger firms and some of their trade associations are in constant contact with the Canadian government on this issue and government concerns and objectives vary from sector to sector.

For example, in the defence sector there are a number of defence-sharing agreements, both with individual countries and with the North Atlantic Treaty Organization, which are invoked on a fairly regular basis, particularly where major defence procurements are involved. This process has worked reasonably well over the years to build a strong defence industry in Canada capable of overcoming serious trade deficits or other disruptions, as is evidenced by the fact that many companies in the sector are net exporters.

In a paper on the growing microcomputer sector published by the R.W. Evans Research Corporation (*To Study and Report on the Extent to which Foreign Multinationals are Good Corporate Citizens in Canada*, August 20, 1981) it was suggested that the following criteria should be of most concern to such firms and to the Canadian government:

- **Employment** — the number of Canadian employees per dollar of Canadian sales revenue as compared to the worldwide ratio;
- **Research and Development Expenditures** — on the same basis;
- **Fixed Assets in Use** — on the same basis;
- **Taxation** — the corporate taxes paid to both levels of government (provincial and federal) per dollar of sales as compared to the worldwide tax rate for the parent company (an aspect of corporate accountability that individual U.S. states are dealing with in their introduction of so-called "unitary taxation").

The Evans report examined these four ratios for 13 of the largest foreign-owned computer companies in Canada as the results showed that, for 1980:

- If the 13 foreign computer/communications firms were putting as much investment into Canada on a proportional basis as they were into their worldwide operations, there would be 21 100 more jobs for Canadians in the industry.
- If these companies were putting proportional investment in research and development in Canada, 2 392 of those jobs would be in the R&D sector.
- If these firms were manufacturing in Canada on a proportional basis they would have invested at least $500 million more here than the $225 million they already have in property, plant and equipment. This would constitute "bricks and mortar" kind of employment over and above the estimated 21 100 jobs already mentioned.
- If the companies had paid taxes in Canada in 1980 at a rate proportional to their worldwide rate, the Canadian government would have obtained an additional $49 million or 30 per cent more than they actually did receive.

As stated earlier, the Canadian government has not adopted these measurement criteria or, indeed, any other fixed criteria for this industrial sector but has opted for negotiations with individual companies and the major trade associations in the hope that the industry will regulate itself.

However, in the final analysis, it is up to the individual management teams of such firms to bring these concerns to the attention of their owners. If they want to build companies that will last forever and operate with minimum government intervention, they should be concerned about such disruptions in the Canadian economy.

Conclusion

While Canada's technology-intensive industrial sector is in a state of rapid change and faces many problems, none of these problems is insurmountable. The world product mandate is a viable tool for addressing them.

The primary responsibility for dealing with such problems rests with the management teams currently directing the affairs of these foreign-owned companies. The Canadian market for technology-based goods and services will always be an attractive one and it can be improved by world product mandates.

A final word from a company with a world product mandate:

"The company I work for, which designs, manufactures and exports high technology computer products, has been successfully carrying out world product mandates for some years. The payoffs for companies such as Control Data have been both financial and personal for our employees and beneficial to the country in terms of employment, balance of trade and technological innovation" — M.T.S. (Dudley) Allan, president, Control Data Canada, Ltd.

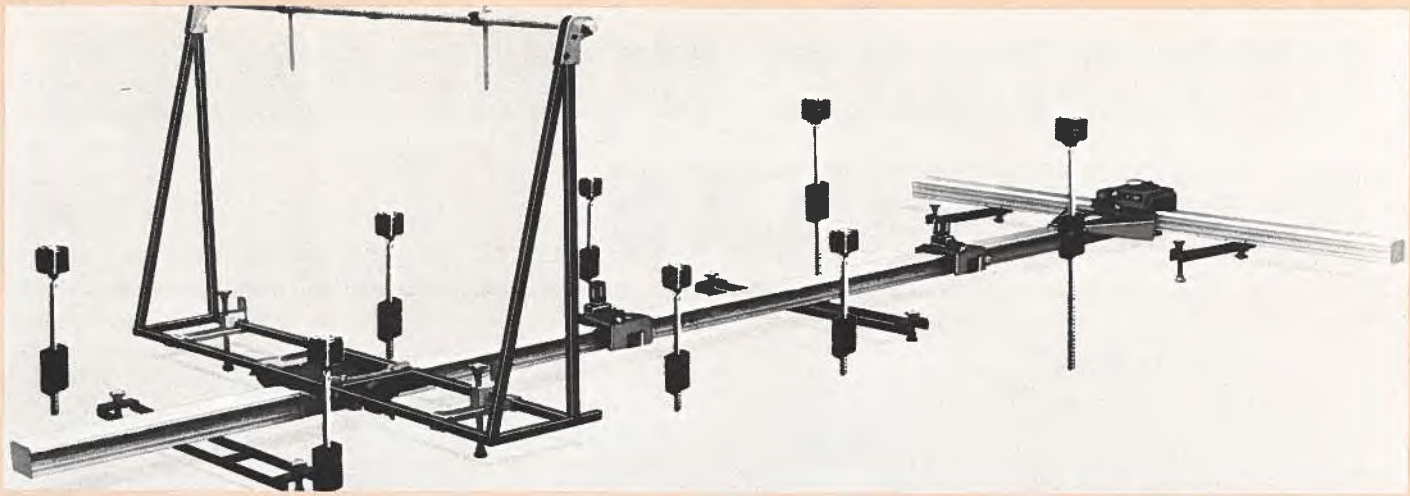
— prepared for *Canada Commerce* by Denzil Doyle of Doyletech Corporation

CANADIAN COMPANIES & PRODUCTS

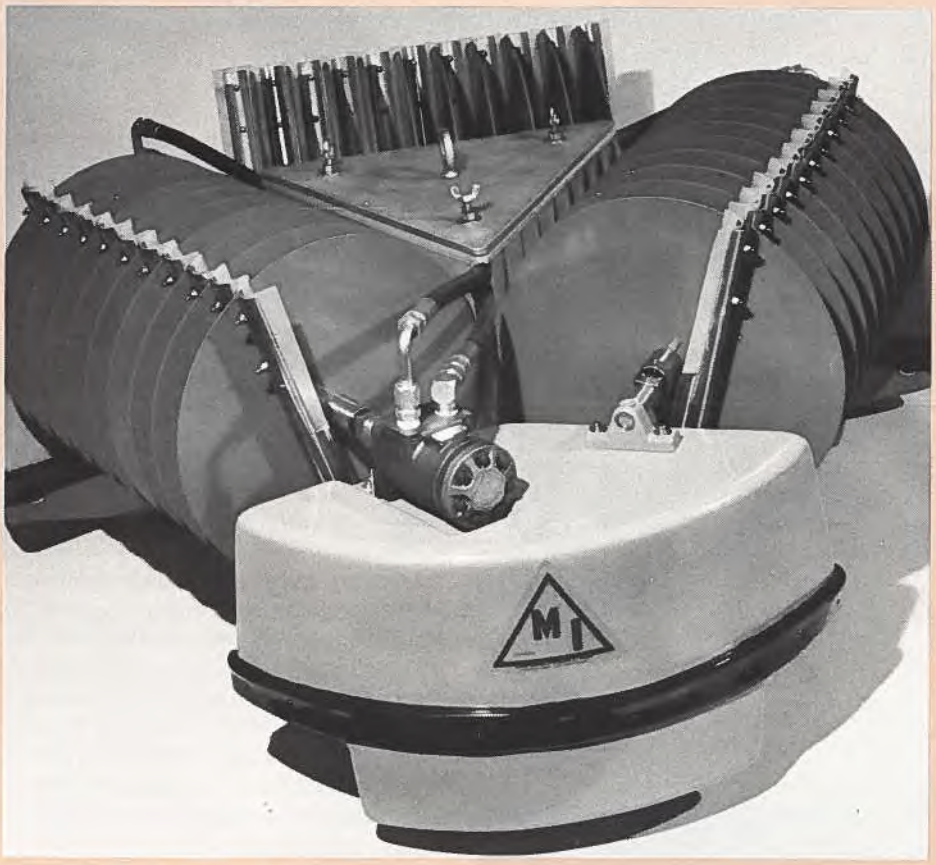
Electronic Control Systems
D.A.P. Electronic Canada Limited designs and manufactures electronic control systems for a wide variety of customers. For the automotive aftermarket there are back-up alarms for on and off highway vehicles; an electronic thermostat to control a car's block heater; an automatic idler shut-off device for energy saving; and the solid-state Auto-Start that automatically stops and starts a car engine to keep it warm. The company claims to be the first in Canada to make hand-held microcomputers for many applications such as inventory control.

Freight Forwarding Service to China
Livingston International Freight Incorporated, of Mississauga, Ontario, has been appointed the official freight forwarder between the People's Republic of China and Canada through a "letter of co-operation" with the China National Foreign Trade Transportation Corporation. The firm can arrange transportation requirements and provide packing, warehousing, freight consolidation and customs brokerage services.

Construction Export Consortium
A group of seven leading construction companies have joined to form a consortium — Canadian International Construction Corporation (CICC) — with head offices in Ottawa. CICC and its members offer foreign clients a full range of construction services, procurement, management, construction operations, training and start-up. CICC members are: Atlas-Gest International Inc.; BG Checo International Limited; Fitzpatrick Construction Limited; The Foundation Company of Canada Ltd.; Janin Construction Ltd.; Pitts Engineering Construction; and Sintra Inc.

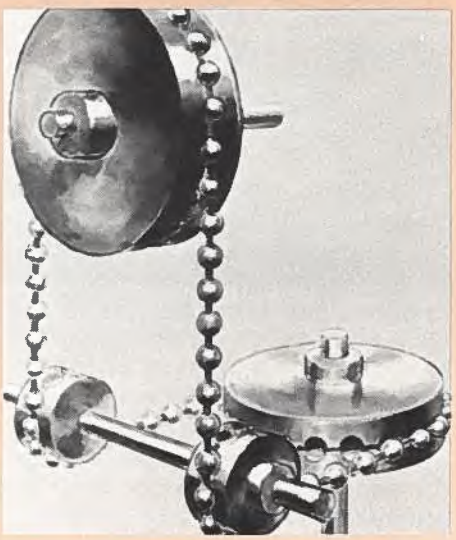


Tri-Scan Lasergraphic Measuring System
Chart Industries Ltd. of Pickering, Ontario, produces the Tri-Scan lasergraphic measuring system for the autobody repair industry. The system allows the repairman to measure easily a vehicle's length, width and height as well as its underside, upper body shell or McPherson strut areas. A laser projection, mounted on a sliding tram, allows the axis of measurement to be moved laterally across the entire width of the vehicle. With magnetically mounted gauging targets, the repairman can measure all of the critical locations on the vehicle.

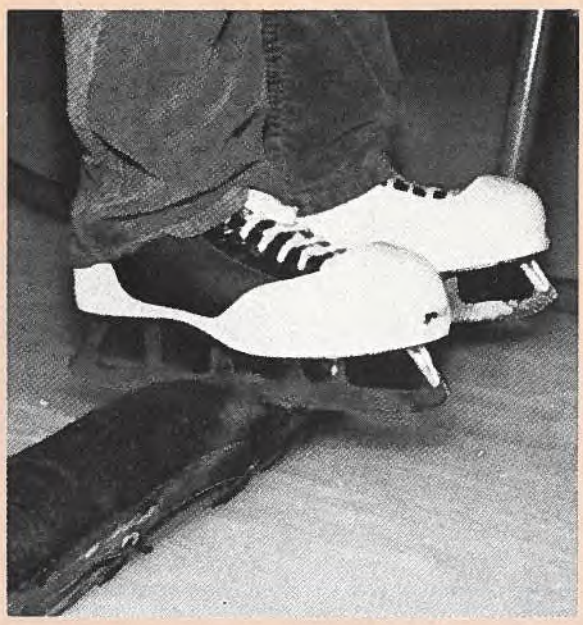


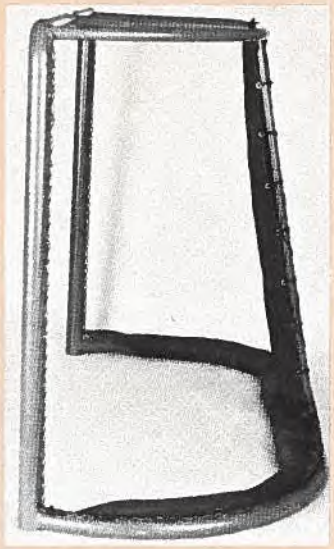
Oil Pollution Control
Morris Industries Ltd., North Vancouver, British Columbia, designs and produces oil pollution equipment including various types of disc oil skimmers and booms. The MI-30 skimmer operates on a rotating disc principle and is designed to recover oil at 450 litres/min. (100 gpm). The company's latest development is a series of small fixed skimmers supplied with a remote power pack (recover rate 22 - 450 litres/min. — 23 - 100 gpm). Sales have been made to Tanzania, Bougainville, Singapore and Australia.

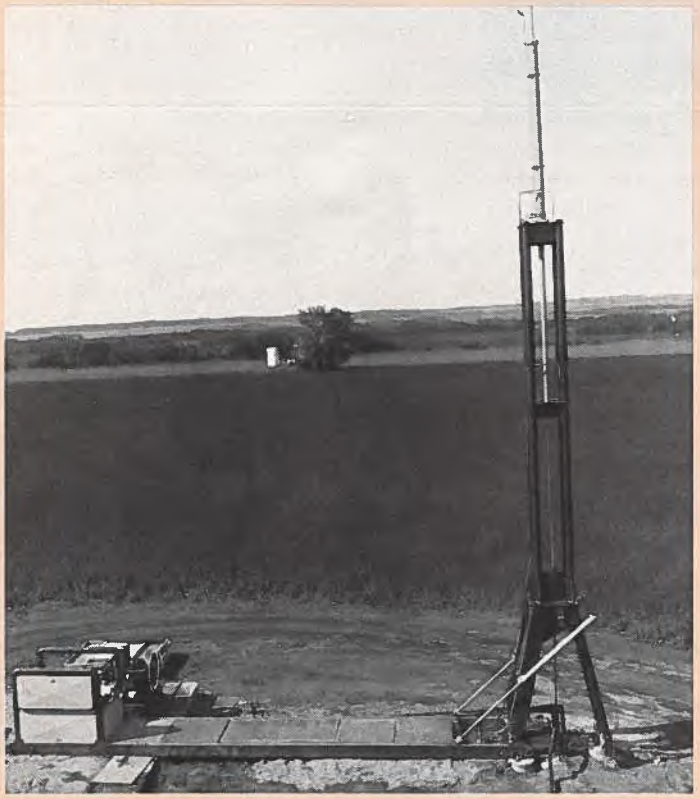
DYNALOC Cable Drive Systems
Solus Industries Ltd. is licensed manufacturer and sole distributor in Canada for DYNALOC non-slip cable drive systems, designed for a complete range of installations of power transmission and motion transfer. It offers lubrication-free, maintenance-free, non-slip, constant speed drives that will transmit any horsepower requirement with any desired speed ratio. The cable drive is symmetrical; can turn any corner or angle; will drive any shaft axis; has no moving parts; is flexible; and eliminates belt creep that causes speed variations. It ensures positive synchronous drive and accurate speed control.



Hockey Goal Frame Holder
"Megg-Nets", termed a "revolutionary magnetic way to hold hockey goal frames in place", is produced by Dennis Meggs Enterprises of Ayr, Ontario. Endorsed by a number of hockey associations and currently used in several NHL arenas, the "Megg-Nets" greatly reduce the chance of serious injury if a player falls or is pushed against the net. Designed with varying releasing capacities so that all groups can use them, they have no steel pipe or plastic projection above the ice surface, enhancing their safety. "Megg-Nets" contain permanent magnets that need no electric source and never lose their magnetic power.

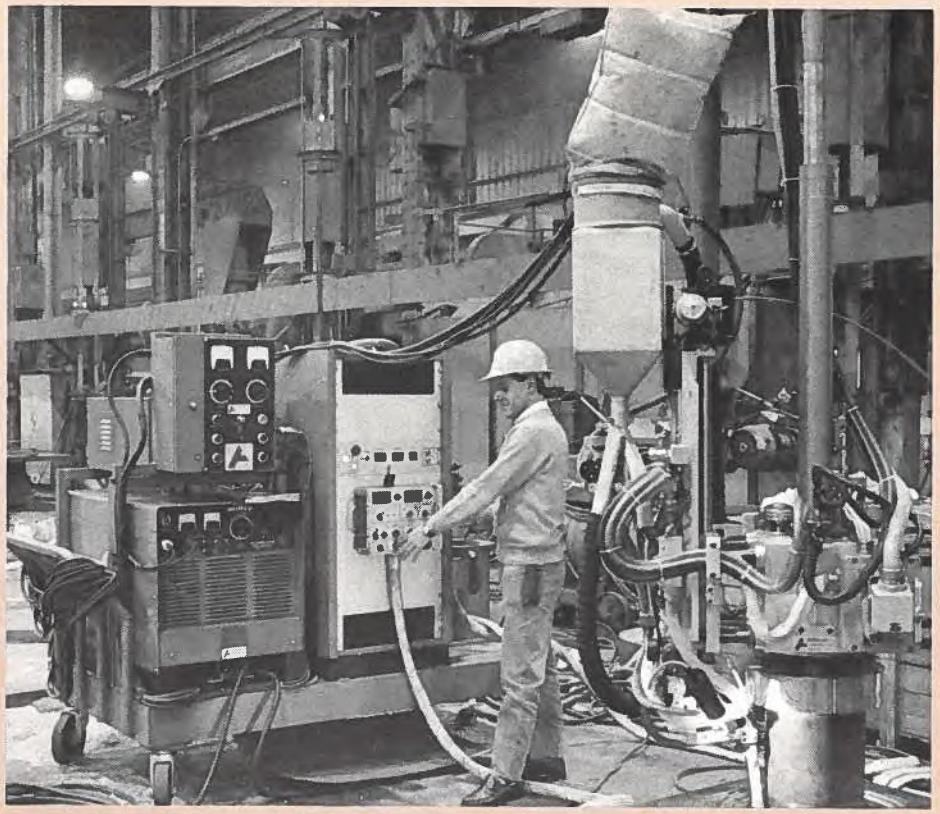






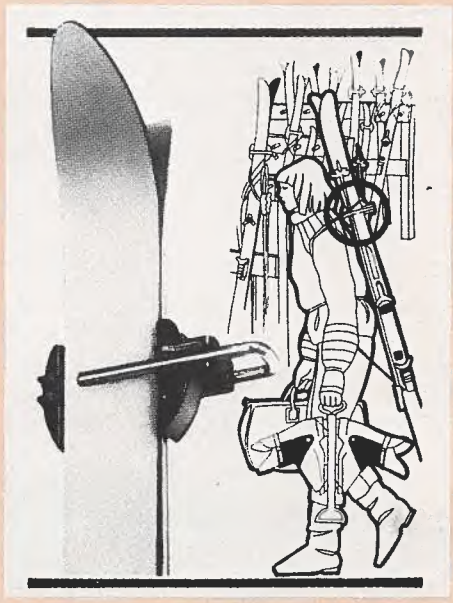
Hydraulic Surface Pumping Units
A division of Canadian Foremost Ltd., HEP Pumping Units manufactures hydraulic, variable speed, surface pumping units and variable speed packages at its Lloydminster, Alberta, plant. Units offer variable speed controls, ease of counterbalance adjustment and multiple stroke lengths — all controlled from a simple electronic panel. They are light and easy to install and can be lowered hydraulically for ease of maintenance and well servicing. The variability of the HEP unit gives it a particular advantage in both primary and enhanced heavy oil recovery as well as in more conventional applications.

Electronic Trip Recorder
Centrodyne Inc. is North America's largest manufacturer of taxi meters. New is the *Silent 1000* electronic trip recorder designed for fleet transport operation (buses, transport trucks) needing a vehicle supervisory system. The basic system offers a distance/speed transducer and dash-mounted display unit with two separate windows — the left for digital read-out of vehicle speed, rpm and fuel consumption; the right a digital clock. At the end of a work shift, the unit will display sequentially the distance travelled/trip time; average speed/maximum speed; average rpm/maximum rpm; average fuel consumption/fuel used; number of stops/stopped time; and other vital information. The vehicle driver's performance for periods up to 30 days is also detailed.



Heavy Wall Pressure Vessels
Versatile Vickers Inc., a Montréal-based metal fabricator with a world class facility for the manufacture of heavy wall pressure vessels, is to supply two heavy wall vessels for the Canmet Hydrocracker demonstration unit being installed in Petro-Canada's Montréal refinery. Involving considerable expenditure in new equipment and training and the development of welding methods and procedures, the project will be carried out using fully automatic submerged arc narrow gap, a state-of-the-art method of welding approximately three times more efficient than that normally used in Canadian shops.

Ski-Latch — Security on the Slopes
Manufactured and marketed by Sysper Production Inc. of Dorval, Québec, Ski-Latch is a compact, practical locking device adaptable to all alpine skis allowing the skier to lock or carry skis comfortably, leaving hands free to handle other equipment. Made of unbreakable plastic with a strong steel latch, a two-metre (six-foot) cable and a lock, Ski-Latch is small enough to slip easily into a pocket or bag when not in use and can be attached to skis in seconds.



For further information about the products and companies listed, please contact:

D.A.P. Electronic Canada Limited
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Telex: 051-3336

Livingston international Freight incorporated
5945 Airport Road
Mississauga, Ontario
L4Z 1R9
Tel: (416) 678-9050

Canadian Internationai Construction Corporation
99 Bank Street, Suite 666
Ottawa, Ontario
K1P 6B9
Tel: (613) 230-6262

Chart industries Ltd.
890 Brock Road South
Pickering, Ontario
L1W 1Z9
Tel: (416) 839-1166
Telex: 06-981271

Morris industries Ltd.
1527 Columbia Street
North Vancouver
British Columbia
V7J 1A3
Tel: (604) 986-2189

Soius industries Ltd.
P.O. Box 141
Burlington, Ontario
L7R 3X8
Tel: (416) 681-1173
Telex: 061-8989

Dennis Meggs Enterprises
R.R. No. 1
Ayr, Ontario
N0B 1E0
Tel: (519) 623-6386

HEP Pumping Units
Division of Canadian Foremost Ltd.
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Tel: (514) 256-2651
Telex: 05-828735

Sysper Production Inc.
200, avenue Ducharme
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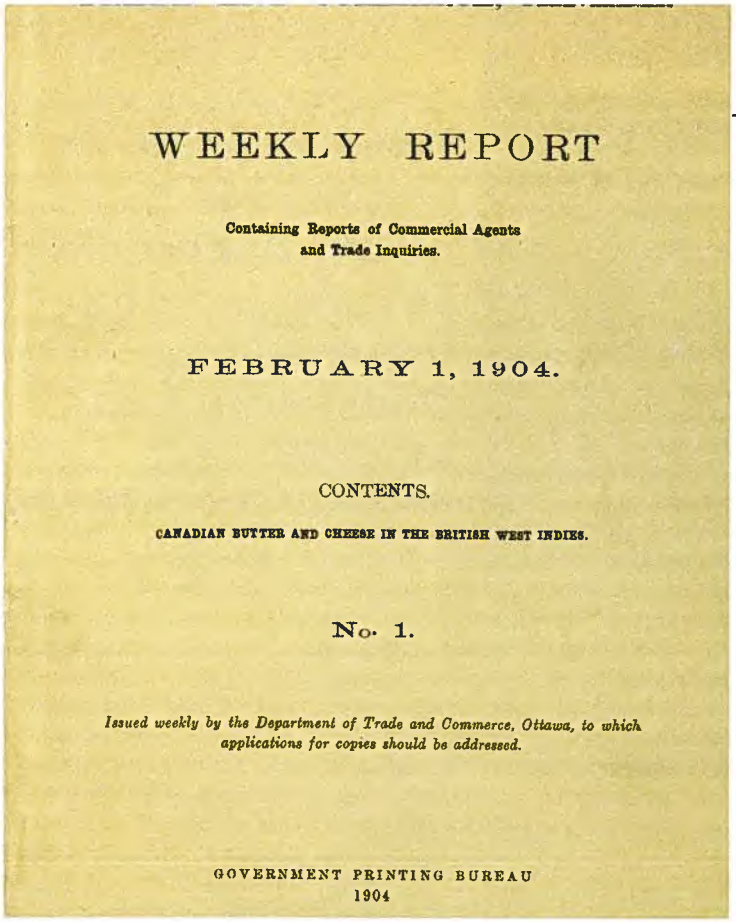


WEEKLY REPORT

Containing Reports of Commercial Agents and Trade Inquiries.

FEBRUARY 1, 1904.

CONTENTS.

CANADIAN BUTTER AND CHEESE IN THE BRITISH WEST INDIES.

No. 1.

Issued weekly by the Department of Trade and Commerce, Ottawa, to which applications for copies should be addressed.

GOVERNMENT PRINTING BUREAU
1904

Now We Are Eighty!

1904, Weekly Report — 1984, Canada Commerce

Canada Commerce *has become an octogenarian, an age which few publications have attained.*

In much the same way that Canada has passed from an era of the horse and buggy to one of jet aircraft and sophisticated technology, the production of Canada Commerce *has gone from a small, manual linotype operation to a computer-driven process.*

Those 80 years also have been witness to constant growth and evolution in the world of Canadian business. In many respects our department and Canada Commerce *have been a reflection of that change.*

On a wintery day in late January 1904, the Minister of Trade and Commerce was angry when he arrived at his office. For Sir Richard Cartwright, pressures from the Canadian Manufacturers Association were becoming intolerable. It was not enough that his Deputy Minister, W.G. Parmelee, was off on sick leave but his arthritis was acting up. Now the CMA was complaining about the lack of up-to-date news on markets abroad.

Summoning his nephew, Francis Charles Trench O'Hara (who was also his secretary and considered the "bright young man" of the department), Sir Richard outlined his problem. O'Hara quickly suggested that a weekly magazine be started and, like many who propose bright ideas, found himself left with the job of putting the magazine out.

The next week, on February 1, 1904, the first slender issue of *Weekly Report* appeared, a 12-page, 6 in. × 9 in. volume. The feature article highlighted "Canadian Butter and Cheese in the British West Indies".

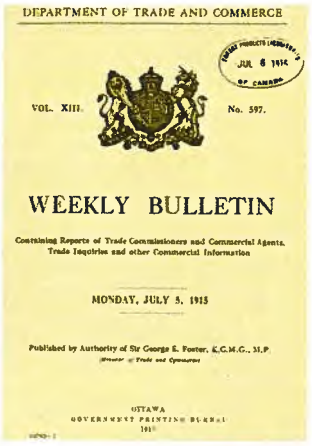
This was the modest beginning of a magazine which, following several incarnations, was to become *Canada Commerce*. It also established a trade and export orientation that would set the tone of the magazine for years to come. Indeed, Canada's Trade Commissioner Service (for many years a part of the same department) looked upon the magazine as its own. In fact, at one point Trade Commissioners abroad were not only expected to submit articles for the magazine but, in time, were assessed on the quantity and quality of those articles as they appeared.

Conditions in 1904

Of a total budget of slightly less than $3.5 million for the Department of Trade and Commerce in 1904, more than $2 million was spent on the payment of bounties — a turn of the century version of today's Industrial and Regional Development Program (IRDP). Payments were based on the production of industries the government felt were desirable.

The bounties amounted to $1.5 million for iron ore, $350 000 for crude petroleum and an equal amount for lead refining. Another major expense was the payment of mail and steamship subventions ($683 000) for the support of export.

Salaries for the department did not make a large part of the budget expenses as full-time Commercial Agents were paid $3 000 a year and correspondents, $250.



DEPARTMENT OF TRADE AND COMMERCE

VOL. XIII. No. 597.

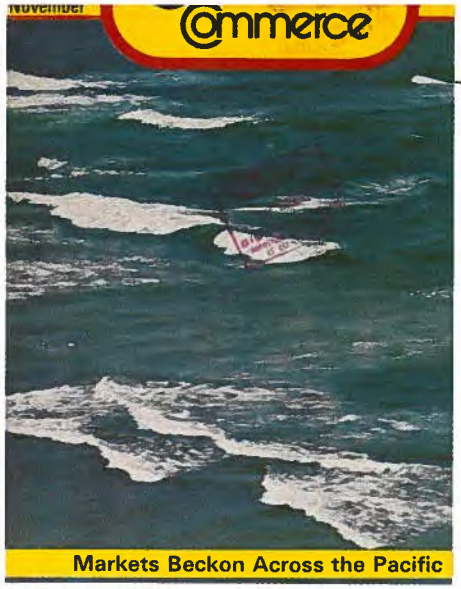
WEEKLY BULLETIN

Containing Reports of Trade Commissioners and Commercial Agents, Trade Inquiries and other Commercial Information

MONDAY, JULY 5, 1915

Published by Authority of Sir George E. Foster, K.C.M.G., M.P.

OTTAWA
GOVERNMENT PRINTING BUREAU



From modest beginnings in 1904, undergoing several incarnations, *Canada Commerce* has evolved.

By way of comparison, the 1981-82 budget for the former Department of Industry, Trade and Commerce amounted to some $900 million and Canada's trade surplus for the same period was in excess of $5 billion.

A Promising Future

One would never have known it from the dour, pessimistic Sir Richard Cartwright, the then Minister of Trade and Commerce (often called the "Knight of the Blue Ruin" or the "Sieur of the Dolefull Countenance"), but 1904 was a time of apparent promise for Canadians.

In 1904 alone, 131 152 people emigrated to Canada lured by that promise and, in the ensuing decade, more than two-and-a-half million came. As a result trade, and therefore *Canada Commerce's* predecessors, became more important to the business community.

The ethnic mix that today forms Canada's population has broadened the economic base of the country. Old world ideas and technology, brought over by the immigrants, have been married to new world innovation and drive to develop new products, new industries. This industrial and economic growth gave new scope to the magazine.

The Magazine Grows

By 1915, when the *Weekly Report* became the *Weekly Bulletin*, Canada was embroiled in the First World War. The Bulletin retained the same format as the Report but increased in size from an average of 14 pages to 56. It listed 18 Trade Commissioners and five Commercial Agents assigned to 16 different countries.

The inside cover carried the following box:

> The purpose of the Commercial Intelligence Service is to promote the sale of Canadian products abroad and to provide Canadian manufacturers and exporters with information regarding trade conditions and opportunities in countries in which Canadian goods are likely to find a market.
>
> The Department gathers, compiles and publishes the *Weekly Bulletin* and supplements thereto a large volume of useful commercial information. Persons desiring it and interested in Canadian production or export may have their names placed on the regular mailing list on application to the Department of Trade and Commerce, Ottawa. There is no subscription to the *Weekly Bulletin* but its circulation is strictly confined to Canada.
>
> A list of Canadian Trade Officials and British Consuls, and a Table of Contents of the current number will be found on the last pages of the Bulletin.

Agricultural news continued to dominate, followed closely by economic conditions brought on by war and widespread droughts in many countries but principally Australia and Argentina.

By 1922 the *Weekly Bulletin* became the *Commercial Intelligence Journal*. Agriculture and the import of agricultural products, while still an important item in the Journal, by 1922 had been partially replaced by news of lumber and other forest products in the overseas reports as were the possibilities for sales in such diverse products as pig iron and wallpaper.

In 1947 a major change was instituted when the title was again changed to *Foreign Trade* and, by 1970, the present 8¼ × 11 format adopted. But the changes were much more pronounced than the colour cover indicated. Inside, feature articles written in magazine style replaced the dry statistical tables carried in *Commercial Intelligence Journal* and photos were used to show conditions throughout the world.

Over the years, change followed change as the magazine expanded and evolved in scope to meet the needs of the department but, most of all, to serve its readers, the Canadian industrial and business communities.

When two departments — Trade and Commerce and Industry — merged in early 1970 to form the Department of Industry, Trade and Commerce, the direction of the new department changed considerably as did that of the magazine. It now became *Canada Commerce* (1971) to reflect the increased emphasis on the broad spectrum of business, industry, small business and tourism in Canada, in addition to maintaining a strong export trade orientation.

The most recent event affecting *Canada Commerce* occurred in 1982 when a major re-organization of depart-

ments was announced. The trade function of the Department of Industry, Trade and Commerce along with the Trade Commissioner Service were transferred to the Department of External Affairs.

Industry and commerce were then merged with the former Department of Regional Economic Expansion and a new department — the Department of Regional Industrial Expansion (DRIE) — was formed.

And with the creation of a new department came both the necessity and the challenge to ensure that *Canada Commerce* would reflect the role and mandate of DRIE. This, according to Deputy Minister Bill Teschke, is "to increase overall industrial, commercial and tourism activity in all parts of Canada and, in the process, reduce economic disparity".

To start with, while the magazine will continue to provide news and promote the development of export markets, trade has diminished as a factor both in the department and the magazine.

Within the above framework, the major objectives of *Canada Commerce* will continue to be — to communicate priorities, activities and programs of interest and pertinence to its readers; to explain government services and their value; to provide information and advice to business and industry; and, of course, to increase circulation.

In meeting these objectives, the magazine will:

- Place increased emphasis on industry and market development;
- Concentrate on high-technology and productivity;
- Emphasize business successes in feature articles;
- Include articles on such topics as productivity improvement, market development, licensing, sub-contracting, financing, etc.;
- Include input from other federal and provincial sources in the form of articles and information pieces;
- Highlight particular industries or regions.

The various regions across the country are of major importance both to the department and to *Canada Commerce* and this will be reflected in increased emphasis on articles on and from the regions. Some will be directed at specific audiences within designated regions while others will be of general interest but originating from the regions.

Issues of the magazine will be dedicated to specific themes such as individual regions, various industry sectors, market development, productivity improvement, among others.

A Final Birthday Word

The years have seen Canada Commerce *age gracefully, adapting to new conditions and meeting associated challenges. As it celebrates its 80th birthday, it moves into a new era determined and confident it can maintain its relevance to those who matter most — its readers.*

Canadian Ultralights Take Off

A new breed of aircraft is following the Canadian pioneering tradition. Thousands of pilots are now flying at an economical cost undreamt of only a few years ago when aircraft operating expenses were rapidly increasing. The Ultralight aircraft have arrived!

There are already more than 20 000 Ultralights flying in the United States and approximately 1 200 registered in Canada. The market has rapidly expanded since 1975 when John Moody casually strapped an engine on his hang glider and flew it over Long Lake near Milwaukee.

The Ultralight aircraft is well-named. A single-seater cannot weigh more than 130 kg (286 lb.) which is less than one-quarter of the weight of a conventional small aircraft. This restriction has thoroughly tested the ingenuity of designers who have produced a wide variety of craft.

Among the best of these are the Canadian Ultralights.

The gossamer wing Lazair from Ultraflight.

Lazair

Ultraflight Sales Limited, located at Port Colborne, Ontario, is establishing a reputation for Canada with its Lazair similar to what Performance Sailcraft did with the Laser sailboat. Offering quality and performance, the Lazair enables the enthusiast to take to the air for an investment of less than $7 000 plus about 150 hours of his time assembling the aircraft. For an extra $1 200, he can add a set of floats.

The Lazair, designed by Dale Kramer, has developed a loyal following. Kramer's original design has remained superficially unchanged but many improvements have been incorporated since the aircraft's debut in 1979. Performance of the Lazair is enhanced by an optional streamlined, fibre-reinforced plastic cockpit enclosure, the practicality of which is demonstrated by the Monterey, California, Police Department's decision to install it on a surveillance Lazair.

Most of the Lazair's flying surfaces are covered with Tedlar (a transparent plastic film) giving a fragile, gossamer appearance to what is really an exceptionally strong structure. This aircraft is designed to withstand four times the force of gravity and, although not recommended by the company, can loop-the-loop. A cover feature article in the authoritative U.S. publication *Ultralight Pilot* concludes that the Lazair represents probably the best investment a prospective Ultralight purchaser can make.

Thor 1

The Thor 1, in both single and two-seat versions and with optional floats, was introduced to the market early this year by Thor Air, a Weston, Ontario, based company. General Manager Mark Vannan emphasizes the aircraft's strength, durability and safety as well as its "tail dragger" configuration which allows operation in rough ground.

The Thor 1 uses struts instead of bracing wires and the wings can be folded back easily for storage or transportation.

Thor 1 flies over the Rockies.

Birdman's Chinook flies over an Alberta barn.

Chinook

Terry Jones ("Birdman" to his friends) manufactured hang gliders in Edmonton during the '70s and then graduated to the design and manufacture of Ultralights. His company is named, appropriately, Birdman Enterprises Ltd. and its latest product is the Chinook. The Chinook offers the comfort of an enclosed cockpit in addition to float and ski options. Careful attention to aerodynamics allows the Chinook to cruise on its 28 horsepower engine for an hour using less than 6.8 litres (1.5 gallon) of gasoline.

The Chinook is the eleventh aircraft designed by Vladimir Talanczuk, and won the Reserve Grand Champion Award at Ultralight '83, the major annual show in the U.S. A two-place version of the Chinook was flight tested in 1983 and should be ready for production early in 1984. Jones emphasizes the rugged qualities of the Chinook aircraft which are designed to facilitate operations from unimproved runways.

The Hawk by Micronautics

CGS Hawk

Micronautics, Prescott, Ontario, also offers an enclosed cockpit Ultralight with optional floats. The CGS Hawk is a U.S. design built under licence but it has a rapidly increasing Canadian content. Micronautics has achieved over 85 per cent Canadian content in its Hawks and has developed Canadian sources which are also supplying the U.S. production line. In only a little over a year of operation, Micronautics has entered the Pacific Rim market with sales to Australia and New Zealand.

The Program for Export Market Development (PEMD) has helped most Ultralight manufacturers with their export sales efforts and Micronautics' experience is worth noting. President Harold Clow reports that "without question, the success of our trip is directly in proportion to the nature and extent of the prior help of the local Canadian Consulate". He recommends making maximum use of the consulate, doing all possible homework and establishing contacts by mail before going abroad.

Reflecting this attitude, the consulate in Wellington, New Zealand, credits Clow with contributing to his own success by contacting them early with specific requests and having a program established for immediate follow-up after his visit. The only note of criticism which emerged was Micronautics' lack of telex facilities which delayed communication but this problem was resolved by utilizing the Department of External Affairs in Ottawa as a link.

Le Pélican

Ultravia, located in Repentigny, Québec, offers three versions of Le Pélican in kit form, all equipped with four-stroke engines. The 18-horsepower version is for the motor glider enthusiast to climb to altitude and then enjoy silent flight; the standard model has 22 horsepower; and the Super Pélican's 35 horsepower turns it into a formidable 'bush' aircraft able to operate on floats. A two-seater version should be available in the spring. In common with other enclosed cockpit Ultralights, Le Pélican achieves air conditioning by the simple expedient of removing the doors.

Ultravia's Le Pélican ready to take to the water.

"No-Name"

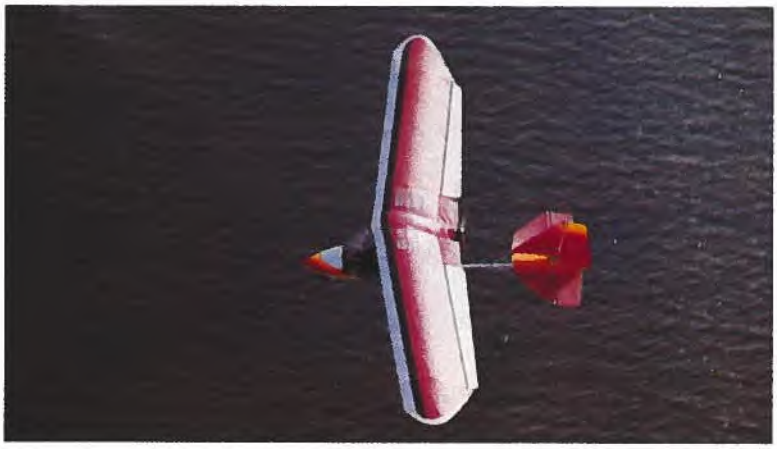
It is the nature of the Ultralight business that new models are continually being introduced. All the Canadian manufacturers have new designs under development and, aware of the growth opportunities, new entrants are appearing. Airtech Canada in Peterborough, Ontario, for example, is flight testing a yet-to-be-named Ultralight which has a new wing based on designs by NASA (the U.S. National Aeronautics and Space Administration) and is promised for early 1984. The Airtech "No-Name" project is unique in the fact that the flight test program has been conducted using a three-metre wing span, radio-controlled model.

Airtech's "No-Name"

Beaver

Spectrum Aircraft Inc., Surrey, British Columbia, was established in 1981 to produce the Beaver Ultralight. Company vice-president, Martin Dennis, quotes a production rate of 15 aircraft per month and notes the imminent availability of a two-seat version and amphibious floats. The Beaver has a standard Lexan windshield which can be supplemented by a complete cockpit enclosure. Dennis emphasises the safety features of the rear-mounted engine and its pusher propeller.

The Beaver in flight, by Spectrum Aircraft.



The Skyseeker on skis for winter operations.

Skyseeker

The first single-seat Skyseeker Ultralight was flown by the Skyseeker Aircraft Corporation in Winnipeg, Manitoba, in 1979. The range of models now includes a two-seater and a crop sprayer variant is under development. The Skyseeker folds for easy car-top transportation and company spokeswoman, Zelda Solomon, notes the compact storage area of 0.6 m by 4.0 m (2 ft. by 16 ft.) and an assembly time of 15 minutes. Mrs. Solomon emphasizes that the Skyseeker operates as a conventional aircraft (as do most other Canadian Ultralights) with "true three-axis control" — the pedals operate a full rudder and the control column operates ailerons and full-span elevators, resulting in a very stable aircraft.

With a line of accessories including instruments, floats, skis and cockpit enclosure, the Skyseekers are offered as all-season aircraft.

The Airchair by Powerair.

Airchair

Another new Canadian Ultralight, the Airchair, is being flight tested at Carp, near Ottawa, by the Powerair Development Corporation. The Airchair is a "pusher" with the engine and propellor mounted behind the pilot. Company president, Richard Manion, sees great market potential for a range of related products in China and is busy learning Mandarin. He is also convinced of the applicability of the Airchair to crop spraying where he quotes a potential saving of 90 per cent on the cost of leasing a conventional aircraft.

Zipper

The Zipper, with optional cockpit enclosure, is a new entrant from Zenair, of Nobleton, Ontario. This company was featured in the July/August issue of *Canada Commerce* and has capitalized on its experience with the Zenith family of light aircraft for a unique Ultralight. The Zipper's hinged wings can be folded and secured in two minutes to allow road towing or for added security on the ground in strong winds.

The performance and foldability of the Zipper has attracted a U.S. agricultural spraying equipment manufacturer who promises a large market but increased power is needed to carry the spray equipment. A Super Zipper is, therefore, on the drawing board and it is intended to offer an integrated aircraft and spraying system complete with training program. Zenair's new flight training centre is already attracting customers for the Zipper and is also introducing potential buyers to the company's wide range of aircraft kits and the new factory-built, four-seat, CH-400.

The Zenair Zipper airborne.

Controls Relaxed

Considering the tight control maintained by the Department of Transport (DOT) over Canadian aircraft, Ultralights are remarkably free from certification requirements. While most aircraft must undergo a rigorous certification program, Ultralights only need to satisfy a formula based on wing loading and weight — which effectively limits performance and ensures slow and relatively safe operation.

All a novice pilot needs is a medical certificate, a Student Pilot's Permit, a degree of aptitude — perhaps a little courage — and the use of an Ultralight complete with a qualified instructor. A pass mark on DOT's straightforward examination and satisfaction of the minimum requirements will give the student an Ultralight Pilot's Licence.

Taking a friend for a flight is restricted by DOT's insistence on their being two occupants of an Ultralight only when one is receiving instruction from a qualified instructor. Nevertheless, the two seater is increasing in popularity due to both its training role and its ability to carry a larger payload.

What does the future hold for Ultralights? Enclosed cockpits appear to be in demand, although many pilots enjoy the experience of flying with the wind in the face and up the trouser legs. Performance is becoming more important so more attention will be paid to aerodynamics, composite materials and engine efficiency. Styling, pilot comfort and price will be increasingly important in the highly competitive Ultralight world.

Canadian companies have demonstrated the initiative, ingenuity and technical competence which should ensure that they will capture a large share of this growing market.

— by S.B. Shaw
Electronics and Aerospace Branch
DRIE

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Federal Business Development Bank

Export and Increase Your Sales

Exports have a neat way of adding to a company's sales volume. They generate a flow of funds and — hopefully — profits that were not there before you began thinking along international lines.

"Thinking internationally" is the key to breaking the "sound barrier". But foreign markets are *different and require special handling. Exporting is not easy, but what is? And, with the proper amount of time and effort, it could prove to be a very profitable way to sell your goods.*

Exports form an essential part of the Canadian economy and currently account for more than 30 per cent of the Gross National Product. Canada ranks with the top 10 merchandise trading nations, together with such countries as the United States, the Federal Republic of Germany, Japan, Britain, the Netherlands and France.

Over the last 10 years, Canadian exports have increased substantially and have grown faster than the Canadian economy as a whole. At long last, there has also been a significant shift in the makeup of exports toward manufactured goods.

There has been a recent significant shift in the makeup of Canadian exports toward the manufactured goods.

Why Export?

The attraction of a lucrative foreign market for a company's goods cannot be denied. However, anyone considering exporting should look at both the advantages and disadvantages of taking such an important step. Frequently, companies get into exporting almost accidentally; for example by filling out an unsolicited order received from someone overseas. As well, other firms, which perhaps should export, are reluctant to do so because of a lack of information or because the owners harbour unfounded fears on the problems of exporting.

There is also the mistaken belief that only large companies can export. Studies have shown that many small manufacturing firms have succeeded in the international marketplace by taking advantage of niches not serviced by the larger corporations. Besides, smaller firms are usually able to react more quickly to changing conditions, can handle smaller production runs and meet special demands for colours, packaging, etc.

Here are some of the advantages and disadvantages of exporting:

Advantages

- Increased sales;
- Higher profits;
- Lower unit cost of production;
- Greater use of plant facilities capacity;
- Protection against cyclical downturns;
- Reduction of dependence on single traditional markets;
- Extension of the life cycle of existing products;
- New knowledge and experience.

Disadvantages

- Additional travel, time and expense to develop export markets;
- Additional (or retrained) staff to handle exports;
- Increase in paperwork and shipping costs;
- Possible modifications to the products;
- Additional financing;
- Necessity to learn about customers, language, cultural differences, local standards, tariffs, currency exchange controls, packaging and labelling requirements, payment terms, collection of accounts, etc.

Make a Commitment

Just thinking about exporting will not make it happen. One of the first steps the management of a firm contemplating exporting must take is to make a commitment to see the project completely through. There should be full recognition that the task of developing the market will take some time, that initial sales returns may be slow, and that a reasonable budget for travel and promotion costs needs to be set up at the very beginning of the project.

A senior person in the organization should be appointed to look after this important job. It should be someone who has a good knowledge of the company's operations, and the authority to make decisions on the spot, if necessary. In a small business, this is usually the owner.

It should also be borne in mind that, while this individual is travelling abroad, someone will have to be appointed to take care of the domestic market responsibilities left behind.

As can be seen, those who wish to go into exporting simply to rid themselves of a temporary excess of inventory will have to revise their thinking. A reputation for reliability is essential. Just as one cannot turn the "tap" on and off at will domestically, it is an even more difficult proposition in foreign markets.

Analysis of Potential

Generally speaking, owner/managers of small and medium-sized businesses know their domestic market. They are aware of their customers' product preferences and what prices the market will bear. They also have a flair for the advertising approaches that work and the appropriate channels of distribution for their goods.

Outside Canada, much of this knowledge may be off the mark but a thorough review of the present domestic setup, including the major business and economic trends in the industry, can help in determining those strong and weak points that could assist or hinder a firm's exporting effort.

In your analysis, keep in mind the broad trends that emerge. For example, you should be alert to indications that your company's performance, when compared with the industry's, is not up to par.

The movement or lack of it in the areas of sales, profit margins and prices may tell you something about the state of the overall market, i.e. whether it is growing or has become saturated, and whether aggressive competition is seriously affecting market penetration.

A heavy influx of imports into the marketplace may tell a great deal about some of your pricing policies. Similarly, a heavy swing to exports may be a sharp warning of missed opportunities.

If there is a great untapped potential in the domestic market, you may deem it wiser to concentrate your time and efforts on exploiting this area and postpone the idea of exporting for a while. However, should the evaluation of your company's performance in the domestic market prove generally positive, you should then proceed to determine whether your organization has the potential to export.

Exporting will have an effect on virtually all areas of a firm's operations and, among a number of points that should be covered, begin with an assessment of whether the product is adequate to compete internationally.

The answers should provide a reasonably good idea of your firm's export potential. There will undoubtedly be areas where findings are negative but subject to improvement. For example, a lack of staff competent in exporting could be offset by the hiring of specialists, such as trading houses or international freight forwarders.

Of more concern would be the realization that your products could not compete internationally (price too high, costly servicing, and so on).

Market Selection

Now comes the time to begin selecting export markets.

For all practical purposes, you should probably start your efforts closer to home or in markets that closely resemble your own. In this regard, Canada's traditional trading partner has been the United States with more than 68 per cent of the nation's products exported there in 1982. This reflects the proximity, the size and the common language and culture of the U.S. market. The other industrialized countries, which include Britain, France, Italy, Germany and Japan, together account for over 10 per cent of our exports.

In searching, keep in mind that the newly industrialized nations such as Brazil, Greece, Hong Kong, Mexico, Portugal, Singapore, Spain and the strong markets of the Pacific Rim have experienced growth in their industries and personal incomes, creating demand for certain imports. If markets in Socialist countries are being considered, remember that marketing strategies will differ there, as will the methods of payment.

Keep the following points in mind:

- Plan, from the very start, to make your export business a profitable one.
- Find a need and fill it.
- You can not sell everyone right away. *Concentrate* on one or two markets to start — don't spread yourself too thin. Try to group your markets.
- Do not overlook the smaller, less obvious and possibly less competitive markets.
- Keep within your capacity to service customers. Do not go after foreign orders that you cannot fill.
- Plan to spend time and money visiting foreign markets.
- Check government export assistance programs (PEMD, trade fairs, etc.)
- At the beginning, stay away from markets in which import restrictions or exchange controls can limit your scope.
- Be flexible — product design, packaging, etc.
- Be patient — the culture and business methods of many countries should be respected strictly.

After a review of the many market possibilities, you may find that your choices have become somewhat restricted as you reject areas that do not fit in your criteria. That is the point at which to prepare an in-depth analysis of those export markets deserving closer scrutiny.

"Exporting Your Product", a new Joint Business Management Seminar from the Canadian Export Association and the Federal Business Development Bank (FBDB) is now available. For further information on this seminar or on the FBDB's entire seminar program, please contact the FBDB branch nearest you.

Prepared for *Canada Commerce* by the Federal Business Development Bank.

Ontario Wine Captures Discriminating Tastes

Picture an intimate restaurant, soft lights, impeccable service, gourmet foods and, of course, wine. A Canadian wine, no? But YES — Château des Charmes!

Nestled in an idyllic setting near Niagara-on-the-Lake in Ontario's Niagara Peninsula, one of Canada's newest and most promising wine makers, Château des Charmes Wines Ltd., is making a growing and delightful impact on the taste buds of discriminating wine drinkers.

Established in 1977 on a 23-hectare (58-acre) farm, the wine maker's success bears out the vision of its founders — Paul Bosc, a fifth generation vintner extraordinaire from France, and two Niagara Peninsula partners. It has brought the realization that superior vintage wines can be produced in Canada by small wineries and that these wines can compare favourably with the best European brands.

Château des Charmes wines winning international reputation.

Already, in the company's relatively short life, its wines, first launched in 1979, have won international recognition for their excellence. For instance, in November 1982 Château des Charme's Gamay Beaujolais Nouveau won the traditional race to be the first Beaujolais Nouveau in Paris and, at the same time, won the hearts of many of the tasters.

One wine critic from a French journal found the Canadian wine "technically excellent" with a bouquet reminiscent of bananas and raspberries — highly respectable features of the Gamay grape.

A year earlier it was the turn of the Château des Charmes Riesling white wine. An independent wine tasting session in Toronto with a panel of connoisseurs chose this wine over the popular German Moselle wines.

A few other Château des Charmes successes:

- Seyval Blanc — served to President Reagan at Government House, May 1981.
- Sentinal Rouge — served to The Queen Mother Elizabeth, July 1981.
- Gamay Beaujolais — selected by Air Canada for service in first class on flights from Toronto to London, England.
- Château des Charmes Estate Chardonnay — served to Her Majesty Queen Elizabeth II, April 1982.

And there are more.

Superior vintage wines can be produced in Canada by small wineries and these wines can compare favourably with the best from Europe.

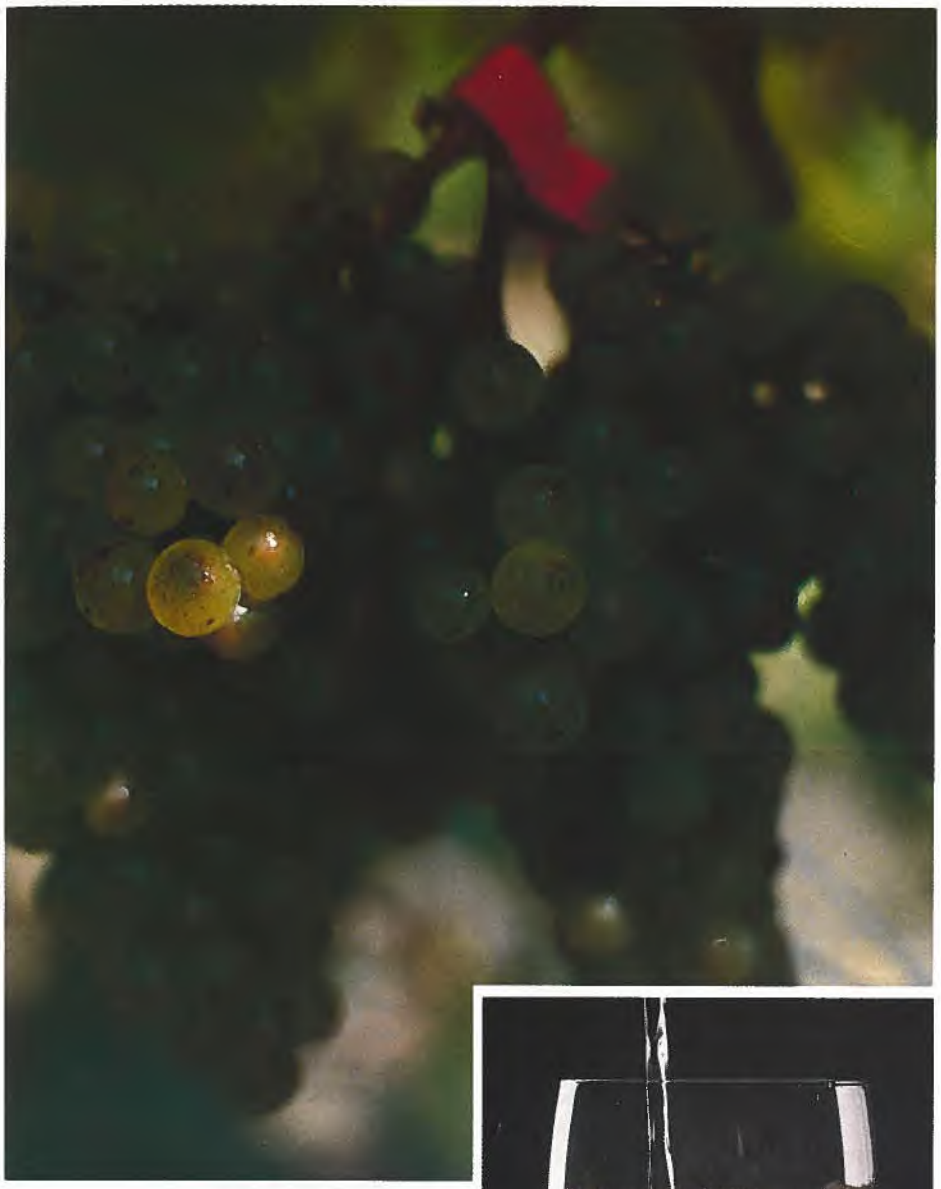
It has been said that any laboratory technician can make wine but only a master vintner can make good wine.

Château des Charmes' master vintner and manager, Paul Bosc, whose name appears on every bottle, sets high standards in both vinyard and winery. He trained in oenology (the science of wine and wine-making) at Dijon in France, where the great Burgundy wine road begins, and later worked in the vineyards of Burgundy.

When he came to Canada in the mid-1960s he first worked for the Québec Liquor Board and then spent 15 years with a major Canadian winery as chief winemaker and director of research.

It was Paul Bosc's imagination and initiative that have resulted in the distinctive Château des Charmes wines. While he was still working with his former Canadian winery employer, he discovered that excellent wines could be made in Canada from such grapes as Chardonnay, Riesling and Gamay. He cleared the Château des Charmes farm of all of its Concord grapes, which are suitable only for jams, juices and dessert wines, and replaced them with noble European varieties on North American root stock.

Bosc believes firmly in total quality control and proper aging for his wines.



Grapes, the basis of fine wines.

"I'm taking the expensive route in making them," he says, "but it pays off in the end."

The Niagara Peninsula company takes a justifiable pride in its three interdependent divisions — farm, nursery and winery — which employ up to 25 people and which, together, are responsible for the Château des Charmes fine wines of distinction.

In August 1983, the company started full-scale trial of an innovative method of processing the locally-grown grapes. At a cost of $260 000 (50 per cent funded by the Department of Regional Industrial Expansion), the trial will test removing part of the water content of the "must" (grape juice) to ensure a consistently high-quality vintage each year.

Wine — cool and subtle — ancients proclaimed it a gift of the gods.

New method of reducing water in the "must" or grape juice without interfering with the quality of the grapes, will improve wine quality.

Reportedly the first practical trial of this method ever held anywhere in the world, it uses "ultrafiltration" of the must by a relatively new membrane separation principle, known to scientists as "reverse osmosis".

"Experiments have been carried out in Europe using this method to concentrate the must," explains Bosc. "At our request, Dr. C.L. Duitschaever and his staff at the University of Guelph have carried out further laboratory tests. They prove that the method is very definitely suitable for our premium grape varieties.

"This project will be to try it in our own winery on a full scale. If all goes well, we will have produced 100 to 200 cases (there are 12 bottle per case) by this time two years from now."

Wine lovers may wonder exactly why the must needs to be concentrated. "The quality of the grapes varies from year to year," he says. "This is why, in some years if there has been too much rain, the resulting wine does not have the body; the grapes simply have absorbed too much water and the wines for that year are not considered 'great vintages'.

"By reducing the water content — and by doing so without interfering with the otherwise fine quality of the grapes — we will have introduced a whole new method of making superior wine in Ontario."

And that from a winery — Château des Charmes — that has already started to win wine lovers' taste buds.

For further information, contact:
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A SONAR with KISS Appeal

Working on the KISS principle (Keep It Simple, Stupid), Gene Hill has designed a commercial fishing sonar that his company, Scannar Industries of Cornwall, Ontario, calls a world-beater.

Scanner's MAQ sonar can detect fish up to 6 400 metres (four miles) in any direction from the fishing boat. The schools of fish are pinpointed in vivid blue on a green video screen. At the same time, the lower section of the screen displays a vertical cross-section showing the school's depth.

"Our fishing sonar is the most technologically advanced in the world," Hill boasts. "We have both a horizontal and vertical display. The competition shows only the horizontal. The others can't tell how big a school is because they don't have the vertical."

Scannar introduced an advanced MAQ II model with simplified controls ("like the difference between automatic transmission and stick shift in a car") at the Seattle Fish Expo '83 last October.

"The response we got from that model was tremendous," says David Rupprecht, Scannar's vice-president of marketing. "We're aiming at the Far East, South American and African markets. And there are hopeful signs we'll get into the Japanese market."

Up to now, Japan's world-ranging fishing fleet has stuck with a "made in Japan" label.

The Cornwall firm is now working on an even more advanced model, the Multi-MAQ, with longer range and higher resolution. It is aimed at the military, scientific and petroleum markets. If a machine can be built that can detect a single herring at a quarter-mile, then one can be designed that can "winkle out submarines and even a torpedo coming at you," Hill says.

Research and development chief for Scannar, Hill, who comes originally from Hudson Bay, Saskatchewan, used his experience in radar and fire control systems with the Canadian air force to design the MAQ sonar. The MAQ is a simplified version of the naval submarine-hunting sonar. (MAQ stands for *M*ultiple *A*perture sonar — the *Q* is the navy code-letter for sonar.)

Scannar's MAQ commercial fishing sonar in place.

Although Hill, 47, is a community college graduate in mathematics, he calls himself a "math cripple". Not having gone to university has helped a lot, he says, because "university grads are programmed and predictable". His colleagues call him a genius.

Hill got into the submersive activities shortly after leaving the air force. He worked on the early omni-directional sub-hunting sonar with Edo Corp. in Long Island, N.Y., and came to Cornwall to help set up an Edo plant to build the sonars for the Canadian navy.

When that order was completed, Hill left to found SITEC Sonar in Cornwall in 1969 and, six years later, split off to start Scannar. He developed the original MAQ model five years ago. Before the 1981-82 recession collapsed the fishing industry, 70 MAQs were sold in a dozen countries.

The company, which had devoted more effort to refining its product than to sales and service, went into receivership. After restructuring, Scannar went back into operation last September and, in the first month, sold three MAQ models.

The new owners are: president, David Hart, 67, a Montréal accountant; general manager, Peter Appleton, 37, with a PhD in international business; and Rupprecht, 45, former assistant sales manager with a textile machinery manufacturer in West Germany.

The special guest of honor at the official opening of the revived Scannar was Ed Lumley, Minister of Regional Industrial Expansion, who announced a grant of $175 000 from his department's Canadian Industrial Renewal Board

Scannar is aiming to sell its MAQ fishing sonars to potential markets in the Far East, South America and Africa.

Scannar's plant in Cornwall.

Plans are being made for Scannar to be considerably more aggressive by sending its sales teams around the world.

plus a $50 000 grant for international market study and a $28 000 PEMD grant.

The National Research Council provided a $350 000 grant from the New Product Development Program toward developing a military sonar while the Province of Ontario provided a $250 000 line of credit.

Scannar was off and running again!

Appleton said the old Scannar "R&D'd themselves to death" and neglected "gung-ho" marketing. The new Scannar plans to be more aggressive by sending sales teams around the world and displaying the MAQ II in Norway, Iceland and Scotland.

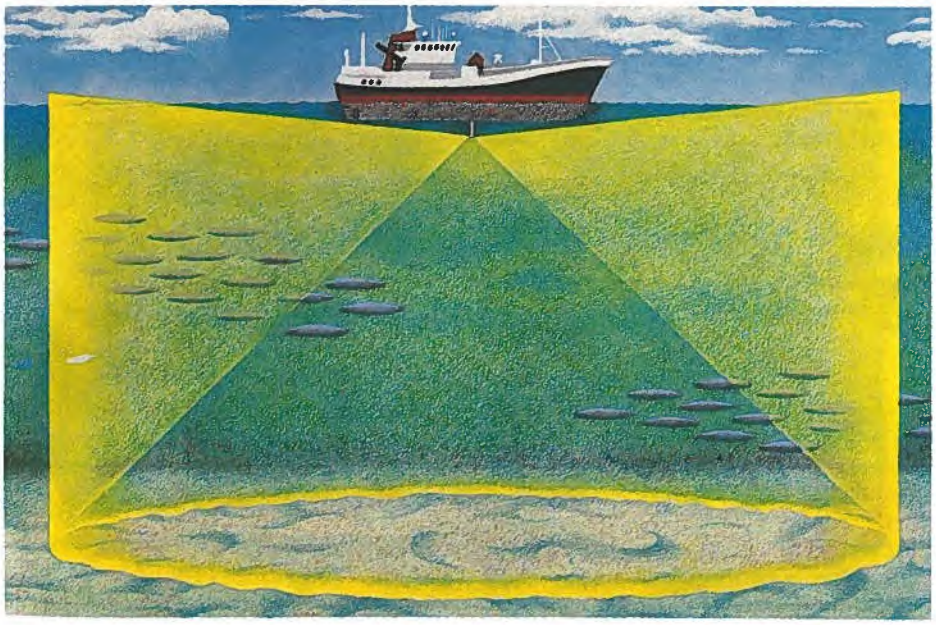
Only five companies in the world manufacture omni-directional commercial fishing sonar — two in Canada (both of them in Cornwall) and the rest in Japan, Norway and West Germany.

"We've developed a totally new sonar in MAQ," Gene Hill says, "while our foreign competition is repackaging old ideas and putting on fancy new displays to make theirs look like new."

The MAQ and MAQ II models range from 15 to 90 kiloHerz (the lower the kH the longer the range but with less resolution) and sell for from $60 000(U.S.) to $150 000(U.S.)

They can run on any world voltage from 90 to 250 volts and are immune to ship-board electrical interference because the information from the transducer (a periscope in reverse) is transmitted by light signals rather than wires. The military-derived optical isolators are unique in the commercial fishing world.

The processing time to take and send an underwater "snapshot" to the display screen is one two-thousandth of a second, four times faster than competitive models. That is important in rough seas and rocky waters.



Schematic drawing shows MAQ's scope.

MAQ sonar is compact, efficient.

The heart of the machine is a Hill-designed computer that operates in the MAQ II at 40 MOPS (mega operations per second) or one forty-millionth of a second — 200 times faster than most micro-computers.

Hill, with his wide-ranging mind, is constantly exploring new ideas. One is a sonar plug for sports fishermen — cast it out and it would send back up the line to the reel information on any fish in the vicinity.

For now, Hill is devoting his talents to keeping even farther ahead of the competition by developing the new Multi-MAQ. And he's sticking to the KISS principle.

As David Rupprecht says: "We're out to show that little Cornwall can take on the world."

— Toronto Regional Office
DRIE

Ontario Firm Puts Design in Computers

In the not too distant past, a designer (architect, draftsman, graphic artist, etc.) sat at a tilt-top desk with paper, pencils, pens, T-squares, triangles — a whole array of drafting paraphernalia — and created a variety of astounding designs. But he (or she) was restricted by the fact that many essential but routine details had to be incorporated before the actual creative process could begin.

Today, more and more of those details are being handled by the modern version of the drafting table — the design computer — and the designer can plunge immediately into the creative process, using the computer for that as well.

The secret is in the software — the commands the computer is given to perform the multitude of tasks required.

A Toronto company, the dream of two young entrepreneurs, Accugraph Corporation has gained a growing reputation for its graphics application software designed to provide solutions to the many problems of computer aided drafting (CAD for short) technology.

Its two founders, Robert Shoniker and Craig Curran, first joined forces in 1976 incorporating Curshon Inc. to provide themselves with a vehicle to apply computer techniques to the worlds of marketing and finance. In 1979, this fledgling business grew to such an extent as to demand a full-time venture for both.

In 1979, the two formed a new company, initially known as Triskelion International Corporation, and started providing custom software and consulting services to such organizations as the Canadian Imperial Bank of Commerce, Templeton Funds, Hawker Siddeley, Shell Canada, the City of Toronto, among others.

Because of the number of graphics-oriented projects the company undertook, it developed an expertise in displaying information through the computer. With an infusion of venture capital in May 1983, it was renamed Accugraph Corporation to better reflect that expertise and its growing list of products.

Today Accugraph Corporation makes the proud claim of providing "the only Canadian-made and owned solutions to CAD" with its new ACCU/CAD software solution.

Important joint marketing arrangements have been signed with three major hardware manufacturers — Prime Computer, Digital Equipment Corporation and Hewlett-Packard — as well as with Tektronix Inc., the company's long-standing co-ordinate in computer graphics systems.

Drafting and design made simple by Accugraph's ACCU/CAD solution.

ACCU/CAD is the company's third and latest CAD solution and provides colour graphics, 2½ D graphics, device independency (it is IGES compatible and can interface with third-party software) and is multi-station and multi-tasking. In addition, it is competitively priced.

Particularly attractive to the Canadian marketplace is the fact that these CAD solutions are wholly Canadian created and owned.

Accugraph is also active in the field of business graphics, second only to word processors and spread sheets in market need. The company's business graphics package is, to quote Robert Shoniker, "just 60 days from its launch on the IBM P.C." and the company has just signed an international distribution agreement with Reston Publishing, the $50 million software distribution arm of publishing giant Prentice Hall.

Most recently, the company has installed its ACCU/CAD software system at two leading technical institutions — Cape Breton College in Sydney, Nova Scotia, and the University of Toronto's Mechanical Engineering Department.

In addition, as of the start of this year, Accugraph and the Canadian Educational Microprocessor Corporation (CEM CORP) began a co-operative marketing program to promote graphic application software for the ICON computer, an educational computer. The Ontario Ministry of Education is purchasing 3 000 ICONs for the Ontario school system.

"Working with CEM CORP is a natural for the company given our success with ACCU/CAD in community colleges and universities in eastern Canada," says Accugraph President Shoniker. "We are looking forward to creating several new software products for the computer-aided learning marketplace."

The CEM CORP agreement caps an "incredible year" for Accugraph including the development of its new name and image, a successful marketing program that has resulted in a current order book of close to $750 000 and the joint marketing venture with Digital Equipment, Prime Computer, Hewlett-Packard and Tektronix.

For 1984, Accugraph expects to enter into at least two more major distribution contracts, expand its market internationally through joint ventures, launch three new products, open at least one branch office and complete at least one major acquisition.

Sales are forecast to more than quadruple to at least $10 million as the company's products expand in number and sales grow geographically.

"With only three per cent of the CAD market penetrated here," Shoniker states, "Accugraph has an important role to play in educating end users and in providing the most cost-efficient and innovative solutions to their productivity requirements.

"The CAD marketplace is not our sole concern, however. With our business graphics packages — and, by the way, we have also developed some computer aided learning software for the home computer market — we aim to be the leader in graphics applications software."

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