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foreign trade

Established in 1904

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COVER Radioactive Cobalt 60, just removed from the atomic reactor NRX, is transferred to a "hot cell". Within the cell, the capsule containing the cobalt will be opened by remote control and the pellets poured into the source container, which the man in the middle is holding. It then goes into the lead shipping case in the foreground. For a report on Canada's exports of cobalt beam therapy units and of other atomic products, see page two.

Isotopes for Export Markets

From the great atomic reactor at Chalk River come nearly one hundred different radioisotopes, capable of carrying out diverse assignments in medicine, industry, and the research laboratory. Today these Canadian-produced isotopes and the equipment for handling them are going to over a dozen different countries. It's a highly skilled and an expanding export business.

O. MARY HILL, Editor, "Foreign Trade".

OUT ON THE FLAT ACRES of Tunney's Pasture in Ottawa stands a low, yellow-brick building that looks like all the other government buildings in that area. But its inconspicuous façade shelters a business that deals in nearly one hundred radioisotopes—a business that begins in the great atomic energy project at Chalk River, 130 miles away, and reaches out to industries, agriculture, and medical institutions in Canada and in a dozen other countries.

Only three and a half years have gone by since the Commercial Products Division of Atomic Energy of Canada Limited, a Crown company, was established, and only two since it moved into its headquarters in Tunney's Pasture. Since then, its business has been growing steadily. Today it employs about 120 people in its main office and laboratories, and another 79 at its machine shops in the west end of Ottawa. These employees range from highly trained professional engineers and salesmen with a specialized knowledge of isotopes to skilled craftsmen and unskilled labourers. Last year they processed and sold radioisotopes and associated equipment worth nearly \$1.2 million. And approximately 75 per cent of this was export business.

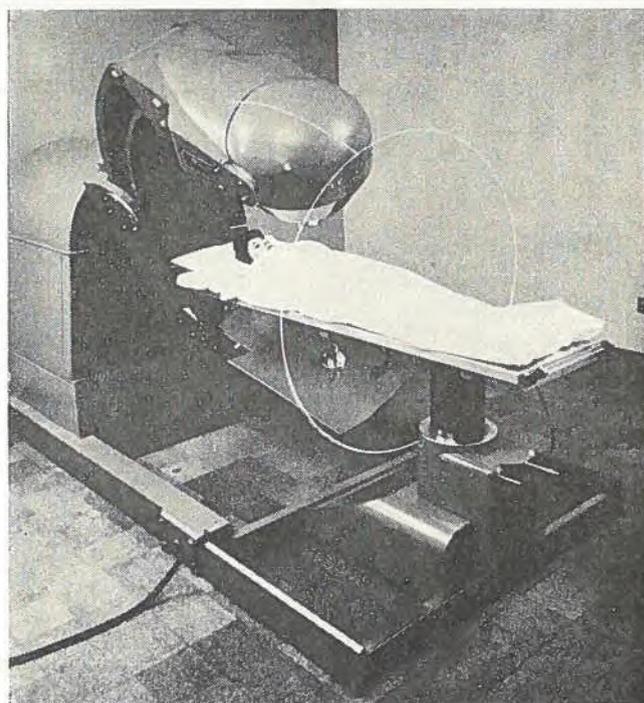
Stock in Trade

When the Commercial Products Division was set up on August 1, 1952, its functions were clearly defined. The annual report of Atomic Energy of Canada Limited for 1952-53 listed them:

1. To market isotopes for which there is a current demand.
2. To develop uses for isotopes which are available but for which no immediate uses are known.

The visitor to the laboratories at Tunney's Pasture sees these isotopes, received in bulk from the Chalk River reactor, and radium from Eldorado Mining and Refining Ltd., prepared for shipment to industrial, medical, or research users. He can examine the tools and accessories which the Division offers for the safe handling of radioactive products, some of which its own technicians have developed. These devices range from simple pick-up forceps to "Adelbert", a remote-control manipulator consisting of an arm and fingers with a more-than-human skill, operated by a man seated comfortably some distance away. The visitor also sees instruments developed for detecting as well as handling radioactive materials and for aerial surveying. And he sees some of the components of the famed Cobalt 60 beam therapy unit.

Selling atomic products, either at home or abroad, calls for a different technique from selling soap flakes or sulphite pulp, flour, tractors, or railway equipment. It calls first for men trained in this newest of sciences



Cancer patient is undergoing treatment with the "Theratron" beam therapy unit. The circle in the middle of the picture illustrates the two-plane motion of the radioactive cobalt source.

and with a further pool of expert knowledge at their command. It calls for extreme care in preparing these products and complying with special regulations in shipping them. It means offering prospective customers skilled advice and demonstrating to them how isotopes might solve their problems. It calls too for constant attention to safety measures and for a special type of advertising.

Isotopes for Industry

Who buys isotopes anyway, and in what ways does industry use them? The catalogue of the Commercial Products Division lists 80 of them—beginning with Actinium 227 and ending with Zirconium 95—plus 22 which are not available at the moment. Listed under each are technical details such as the half life (from 2.8 hours to 7.5 by 10^9 years) the type and strength of radiation, and other details which mean little to the layman. But even the layman can understand some of the industrial jobs which isotopes can do.

Among the Division's steady customers, for example, are oil-well logging companies. They buy or rent a radium beryllium neutron source, first used for this purpose 15 years ago. This source is lowered into an oil bore-hole and followed by a neutron counter. The counter records the differences in the rate of absorption of neutrons in the various sub-surface strata and indicates in this way those in which oil is most likely to be found.

One of the growing uses for isotopes is industrial radiography—checking railway car wheels or castings for flaws, inspecting ships' rudders, or examining welds in tanks and pipelines. Radiography of this type has certain advantages over X-ray: it is cheaper and more effective, and it can be used in places where X-ray equipment cannot easily go. And it is much more powerful; any atom of Cobalt 60 gives out radiation equivalent in penetrating power to that from a three-million-volt X-ray machine. The isotope selected for this work varies. Cobalt 60 is used when the gamma rays must penetrate up to six or more inches of steel, Iridium 192 for up to two inches of steel, and Thulium 170 for low-density metals such as aluminum and magnesium. These three fill the requirements for this work: they are economical, have a long half life, suitable gamma energy, and high specific activity. A Thulium source was recently sold to a German customer for radiography of non-ferrous metals.

The metallurgists too find that isotopes are useful servants. That's one of the reasons why Commercial Products arranged a display at the National Metal Exposition in Philadelphia last fall. In adding nickel to steel, for instance, the metallurgist wants to know how well the nickel is diffused through the steel. A little radioactive nickel is added to the mixture and

measuring the radioactivity that results gives the answer. In much the same way the technician, using isotopes, can discover how thoroughly one metal is bonded to another.

Modern Detectives

Isotopes are used most frequently in industry (and often in agriculture and medicine) for what is known as "tracer" work—or detection of various kinds. An oil pipeline becomes clogged and the trouble must be found and remedied as quickly as possible. One method is to lower a "pig" (a sort of wire brush or scraper) into the pipeline with a Cobalt 60 source attached. The progress of pig and source through the pipeline is followed with a geiger counter. At the point where the pig gets stuck, revealed by the radioactivity of the Cobalt 60, the repairmen go to work.

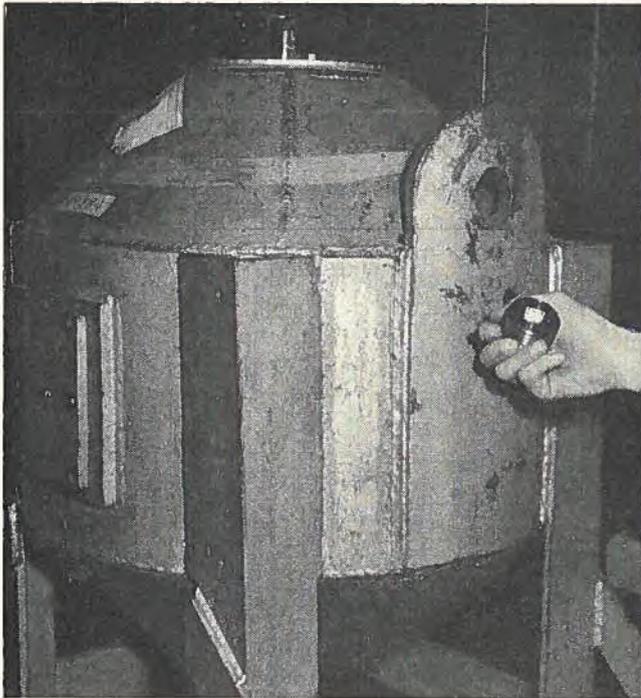
The agriculturist may want to study the way in which plants take up and use fertilizers. An isotope such as Phosphorus 32 or Carbon 14 is mixed with the fertilizer and later the amount of radioactivity in the stem and the leaves of the plant is measured. This reveals how much of the fertilizer the plant has used, the best time to apply it, the amounts needed in various soils, and so on.

The federal Department of Agriculture is experimenting with minute quantities of isotopes in solution to trace the movements of the queen bee. Tiny quantities fed to the queen make it possible to follow her movements with a geiger counter, find out where she goes, and whether she always returns to the same hive.

In much the same way the doctor or the biologist studies processes within the human body. To determine the blood volume of a patient, the doctor can put a little Iodine 131 into an injection of human serum albumin, take a sample of blood after a short time and measure its radioactivity, and then calculate the blood volume. Similarly, a carbon isotope can be incorporated in a hormone and other biological processes in the body followed.

Other Applications

As new uses for isotopes are discovered, the possible markets widen. Investigation has shown, for example, that irradiation can change the physical properties of certain materials. Polyethylene irradiated with gamma rays acquires new physical characteristics, such as a higher melting point, and proves more resistant to solvents. Isotopes for experiments in irradiation and other research studies go largely to universities, government departments and research departments of private companies at home or abroad. Some of these customers send in material to the Division to be irradiated in the Chalk River reactor; these "custom irradiations" form a regular part of its business. They may take anywhere from an hour or less up to several months;



The unseen technician is holding in his hand the International Standard source container, weighing about two ounces, into which the radioactive cobalt will go. Container plus source will travel to the purchaser in the shipping case shown, which surrounds the source with about two tons of lead shielding.

the high specific activity Cobalt 60 required for therapeutic purposes takes from 12 to 18 months.

Although many businessmen are aware that isotopes might prove useful in control, inspection or tracer processes in their plants, most of them haven't the expert knowledge to select the right one and put it to work. To them, the Division offers consulting services. The engineers on its staff are glad to advise what isotope is best suited to the work and how to build the right equipment. It is important to get in touch with the expert at the start: building some equipment and then looking around for an isotope is putting the cart before the horse. In the United Kingdom, the Atomic Energy Research Establishment estimates that it receives about 600 to 800 inquiries a year from industry and as a result discovers about 50 new applications for isotopes. Isotopes from Canada, largely for industrial or other research, have been sold to other parts of North America, to Germany, France, Sweden, Italy and Denmark.

Cobalt 60 and Cancer

Although isotopes have many uses, one has caught the public eye to an unusual degree—the use of Cobalt 60 for the treatment of cancer. That's natural enough; the cancer patient undergoing treatment makes far more appeal than studies in plant nutrition or the sterilization of food or drugs. And, speaking statistically, medical shipments (mainly Cobalt 60 beam

therapy units) accounted for about 70 per cent by value of the total business done by the Commercial Products Division in 1954, because the units, its best sellers, carry price tags that range from approximately \$83,000 down to a more modest \$26,500.

Canadian scientists developed the Cobalt 60 commercial unit and in 1951 installed in the Victoria Hospital, London, the first such unit to go into service anywhere. This Eldorado-A unit for fixed therapy costs \$26,500 plus another \$11,900 to \$25,100 for the radioactive source, depending on the activity and the associated guarantees. Installation charges add another \$2,000 (in Canada) to \$3,000 (abroad). Some time later, the Division put a second unit on the market. This B unit, or Theratron, can be used for either fixed or rotational therapy and costs \$59,000 plus another \$10,000 to \$21,000 for the source and \$3,000 to \$4,000 installation charges. (Cobalt 60 sources have a half life of about 5.3 years.) Since the first unit was introduced in 1951 up to September 1, 1955, 300 thousand treatment hours had been given using Canadian beam therapy equipment. At the present rate, that number is increasing by 700 treatment hours per unit per month.

Demand for Units Growing

Soon the Division realized that demand was growing for a smaller, less expensive type within the financial reach of smaller hospitals and clinics. Last June the prototype of Model C, the Hectocurie unit, made its appearance and in September it was exhibited at the convention of the American Roentgen Ray Society in Chicago. The first production model will be ready in April 1956. Model C will sell for \$22,500 plus an additional \$4,000 to \$6,000 for the source. In all cases, the cost of the source depends upon how long it has taken to prepare it. The price of a Cobalt 60 source about equals that for one gram of radium at current prices, yet in energy, it equals nearly 6½ pounds of radium—about all the radium in the world.

So far, 33 beam therapy units (A and B types) have been sold to buyers in Canada and in six other countries. Each year the business has grown. In 1951, only one unit was installed; in 1954, nine, and in 1955, 17. Many more are being prepared to fill specific orders but they are not counted as sold until they are actually set up and ready to give treatments. The purchasers have included medical institutions in the United States, Italy, France, the United Kingdom, Switzerland, and Brazil. One will shortly go to Burma as a contribution from Canada under the Colombo Plan, and a Theratron is scheduled for New Zealand and another for Australia.

The Division's machine shops out in Ottawa's west end are kept busy making the bulky components of the unit outside the radioactive source; these weigh

up to eight or nine tons. The shops would be busier still if the Division could get more Cobalt 60. That's the limiting factor at the moment. When the new Chalk River reactor, NRU, goes into production some time in 1956, the sales of beam therapy units should move up steadily. Because NRU is much more powerful than NRX, it will require less time to prepare the Cobalt 60 for the source. Currently, customers must wait up to two years for delivery.

Packing and Shipping Problems

Getting radioactive products from the seller to the buyer is more complicated than merely putting them into a container and sending them on their way. If the buyer is a Canadian, he must fill out an "Application for Radioactive Isotopes", send it in to the Commercial Products Division, and wait for it to be approved. (The only exception is for certain sealed sources, used in calibrating instruments.) Shipments to foreign markets require an export permit issued by the Canadian Government. No permit is forthcoming until the foreign buyer has received the approval of the government of the country to which the shipment is going. In each case, the Canadian or the foreign government first satisfies itself that the purchaser is properly equipped to handle radioactive materials and is taking steps to protect his employees against radiation hazards.

The packing and shipping of radioisotopes is also strictly controlled, under regulations laid down by the Board of Transport Commissioners and the Board of Steamship Inspection. Protection against gamma radiation during transit (as in a Cobalt 60 source) needs to be particularly strong. The source for a beam therapy unit which weighs about two ounces goes into a container that surrounds it with about two tons of lead. For all shipments over a certain weight, this lead is further reinforced with steel. This guards against the denting of the lead case if it is dropped on the dock and against fire during shipment, which might melt the lead. The transfer case for the source can be returned to the Division, though some customers retain it as a storage medium. The other components of the beam therapy units are broken down into three or four sections and shipped that way. When the unit arrives at its destination, a Division staff member must re-assemble it and transfer the source into the head of the equipment—unless the agent is himself competent to do the job. A trained physicist must be employed by the institution using a beam therapy unit.

The rules also cover the shipping of products emitting alpha and beta radiation, but these require a much lighter type of shielding. All radioactive shipments, of whatever kind, must bear the label "Poison", in letters at least one inch high.

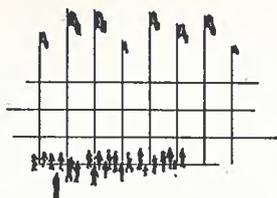
Occasionally timing becomes the all-important factor in shipping. Radioactive gold seeds for implantation in a tumour are one example. The half life of these seeds is only two to three days and they must arrive at a certain strength when the doctor is ready to use them. Technicians at the Division's laboratories measure the strength when they receive the seeds from Chalk River, calculate how much radiation will be lost in transit, and work out the right time to forward them.

Not only the shipping but also the selling of radioisotopes calls for special techniques. It demands technical knowledge combined with sales sense, and it involves plenty of travelling. W. J. Green, the export manager of the Commercial Products Division, has in the last two years visited Australia, New Zealand, most of South America, and several countries in the Far East; he is now planning a trip to India. On these sales trips he works closely with the Division's agents and with the Canadian Trade Commissioner in each territory. With the agent, he visits hospitals and clinics, radiologists, and prominent members of the medical profession. He also devotes time to training the agent.

Promoting Sales

When it comes to sales promotion, the Division has found that one of the best techniques is exhibits at international radiological congresses, specialized trade shows, or medical conventions. In late August, Mr. Green attended the Australasian Trades and Medical Congress in Sydney and showed three models of the beam therapy unit; plans for a similar display at the international radiological congress in Mexico City next summer are already under way. The intention is to install three units and have technicians on hand to answer questions. Two full-size units were exhibited at the Conference on the Peaceful Uses of Atomic Energy held in Geneva last August, and both were sold to Swiss and French buyers when the conference ended. The display at the Atomic Industrial Forum in Washington last September was devoted to selling isotopes for industrial uses rather than beam therapy units. It featured a model of the NRX reactor and also of the NPD reactor for nuclear power now building.

In dealing in atomic products, where security is always a factor, it is difficult to quote exact sales figures or to be specific about markets. Information on total sales, however, can be gleaned from the annual reports of Atomic Energy of Canada Limited. Income of the Commercial Products Division from "sales, rentals and commissions" in the fiscal year 1952-53 totalled \$418,270. For 1953-54, the figure more than doubled—to \$867,727—and for 1954-55, it is estimated at \$1,179,759. With the NRU reactor going into service some time this year and supplies of Cobalt 60 and other isotopes due to increase, the Division is confident that sales will continue to rise and that isotopes from Canada will go to countries all over the world. ●



fairs and exhibitions

Coming in Cologne

● *International Household Goods and Hardware Fair*, March 2-5. The only one of its kind held in Germany, this fair is sponsored by the Household Goods and Hardware Retailers Association. The equipment shown will cover all the cooking and cleaning needs of the home and commercial or institutional kitchen and laundry. There will also be sections devoted to plastic articles, cutlery (including weapons, hairdressing and manicuring instruments, razors and razor blades, and scissors for various uses), locks, fittings (builders, stove, furniture, coffin, etc.), tools, metal goods, shaped steel articles and wire goods.

Less mundane will be the displays of glass, porcelain, ceramics and earthenware; fancy goods, gift articles and smokers' requisites; wickerware and garden furniture; Christmas tree decorations, party goods and toys.

● *International Textiles and Clothing Fair*, March 11-13. Raw materials and the equipment for converting them, the end product, and the means of displaying it are all included in the exhibits at this fair. They cover piece goods, household textiles, furnishing fabrics; machinery for the clothing industry, needles, buttons, yarns, sewing silk; men's, women's, and children's outer clothing and lingerie; hats, caps and umbrellas; leather clothes and goods; bedding, household linen, curtains and carpets; knitted and hosiery goods; shop furniture, requisites and window dummies.

The "fixings" (ribbons, trimmings, lace, veils and feathers) and the accessories (jewellery, wrist watches, gloves, handbags and cigarette cases) will be there too. Other sections are: fancy goods and smokers' requisites, printed products and advertisements, miscellaneous goods.

For information about these two Cologne fairs, write to: German-Canadian Trade Promotion Office, 185 Bay Street, Toronto.

Showroom Features Forest Products

A TRADITIONAL CANADIAN EXPORT—timber products—is holding the floor at the Canadian Showroom in Rockefeller Center, New York. The display of building materials opened on January 12 and will continue until February 17. Plywood, hardboard, softboard, shoe boards, leatherboard and doors form the major part of the exhibit. Special attention is focussed

on Canada's famed yellow birch plywood and unique birch flushwood doors; key operations in the manufacture of these doors are illustrated with colour transparencies.

The show, organized with the co-operation of Canadian producers and manufacturers, is bound to attract the interest of architects, export houses and those in the building trades.

In Spring, Thoughts Turn to . . .

HOMES, to improving the old or to building a new one. And in this train of thought, home furnishings manufacturers, the building trades and their suppliers see opportunities for new business. The result—two home shows this spring, one on each side of that famous undefended border.

In Canada, the National Home Show will open in the Coliseum at Toronto's Exhibition Park on March 30 and will run to April 7. The show is open from 1.00 P.M. to 10.30 P.M. on weekdays and from 10.00 A.M. to 10.30 P.M. on Saturdays. The public is invited. The management of the show says that every product and service involved in building and equipping a home will be displayed—including building materials, plumbing and heating equipment, paints and varnishes, electrical equipment, roofing and insulation, hardware, interior decorating, home furnishings, landscaping, home appliances, mortgage and insurance services, home handyman tools and equipment. Special features will be two contemporary homes showing hundreds of new ideas for better living, and a spring garden with trees and flowers in full bloom. For information: G. Smedmor, 745 Mount Pleasant Road, Toronto.

In the United States, the 1956 International Home Building Exposition, first of its kind for New York, will open in the city's new giant Coliseum on May 12 and run to May 20. The exposition will be open to the public from 11.00 A.M. to 11.00 P.M. daily, except Sundays, when the hours will be 2.00 P.M. to 11.00 P.M. On certain mornings the show will be open to the trade only. As in the Canadian home show, the management promises that the exhibits will cover the full range of the building and allied trades. Special features will include: several fully equipped and furnished full-size homes; a full-size cutaway house

showing details of modern construction; "Maine Street USA", a scale model of a complete town; "Showcase for Better Living Theatre", which will present films on better living; and demonstrations of uses of atomic energy in the home. For information, write to the headquarters of the exposition at Suite M I, Henry Hudson Hotel, 353 West 57th Street, New York 19, N.Y.

A Horticultural World's Fair

CANADIAN FLOWER GROWERS and manufacturers of fertilizers and gardening equipment are invited to exhibit in the 39th International Flower Show being held in New York from March 11-17. This show is well established and has an excellent reputation. It receives a great deal of attention from the press, radio and television, and is attended by all the professionals in the horticultural line and large numbers of people interested in growing flowers.

Complete information about this show can be obtained from Richard B. Farnham, Executive Director, International Flower Show, Inc., Essex House, 157 West 58th Street, New York 19.



Queen Mother Elizabeth admires part of the Canadian display of lumber and other forest products at the Building Trades Exhibition held in London recently. On the left, G. H. Rochester, Canadian Commercial Counsellor (Timber).

Fair Calendar, 1955

IN CANADA

National Gift Show, Exhibition Park, Toronto, February 20-23. For information: Angus Baxter, 9 Duke Street, Toronto.

Canadian Toy Fair, Mount Royal Hotel, Montreal, February 27-March 2. For information: W. J. Cannon, Canadian Playthings Manufacturers Inc., 55 York Street, Toronto.

Canadian Toy Importers Association Toy Fair, Queen's Hotel, Montreal, February 27-March 2. For information: W. S. Thomson, 27 Wellington Street West, Toronto.

Canadian National Plastic Exposition, Exhibition Park, Toronto, March 5-7. For information: B. Danson, 26 Queen Street East, Toronto.

Montreal Gift Show, Show Mart, Montreal, March 5-8. For information: Show Merchandising Ltd., 9 Duke Street, Toronto.

Canadian National Sportsmen's Show, Exhibition Park, Toronto, March 9-17. For information: L. M. Kelly, 85 King Street East, Toronto.

Oil Heating Association, Exhibition Park, Toronto, March 19-21. For information: A. V. Rowe-Sleeman, 19 Richmond Street West, Toronto.

ABROAD

Frankfurt International Fair, Frankfurt, Germany, March 4-8. For information: German-Canadian Trade Promotion Office, 185 Bay Street, Toronto.

International Automobile Show, Geneva, Switzerland, March 8-18. For information: First Secretary, Swiss Legation, 5 Marlborough Avenue, Ottawa.

40th Swiss Industries Fair, Basel, Switzerland, April 14-24. For information: First Secretary, Swiss Legation, 5 Marlborough Avenue, Ottawa.

Correction

THE "FAIRS AND EXHIBITIONS" SECTION in the December 10, 1955, issue of *Foreign Trade* included an article called "Chicago—the Convention Capital". This article concluded with a list of United States trade shows which were willing to accept Canadian exhibits. Some of these shows have a waiting list for space, as indicated by an asterisk. In error, the International Sports and Outdoor Show (February 17-26) was included among these, and the International Home Furnishings Market (January 9-20) was left out. The sports show does not have a waiting list, the home furnishings show does.

Canadian Exports to the United States: a comparative study

ECONOMICS BRANCH,
Department of Trade and Commerce.

Thirty-five per cent of Canada's exports by value in 1937-38 went to the United States; by 1952-54, this figure had risen to 57 per cent. What are the influences behind this growth and what commodities have figured largely in it? To answer these questions, here is a study of the volume of Canadian exports to this market in these two periods, with exports valued in terms of 1947 prices.

THE UNIT VOLUME of Canadian exports to the United States, excluding gold, has tripled since prewar. In contrast, the volume of exports to the United Kingdom has remained at approximately the same level and exports to third countries have doubled. Because of the larger gain in sales to the United States than to all other countries combined, the proportion of the total value of Canadian exports going to the United States market has increased substantially—from 35 per cent in 1937-38 to 57 per cent in 1952-54.

Viewed in terms of the value of United States imports, the Canadian share is also greater—23 per cent in 1952-54 compared with 13 per cent in 1937-38. This increase in the Canadian share of the United States market is reflected in the fact that the total volume of United States imports has risen by only 50 per cent but the volume of imports from Canada has tripled.

Why Sales Have Increased

There are a number of reasons for this more than proportionate growth in Canadian sales to the United States. The volume of national output in the United States has doubled since the prewar period and a

large part of the increase has been in industries requiring crude or semi-manufactured materials available in Canada. In addition, the output of many United States resource industries failed to expand as rapidly as total national output and a larger share of total demand in these industries had to be supplied by imports. The proximity of Canadian supplies, the impetus given Canadian production as a result of the war and trade relations established during and after the war, also contributed to the increase in Canadian sales.

Though it is obvious that Canada has become more dependent on the United States market as a result of these developments it is also true that the United States is now more dependent than formerly on Canadian supplies. This is so not only because the United States is buying a much larger quantity of Canadian goods than before the war, but also because some Canadian and American industries are now more closely integrated than in the prewar period. An important factor in this integration has been the heavy American investment in recent years in Canadian resources industries and in some branches of manufacturing. Many new developments backed by American capital have been undertaken to ensure adequate supplies for the United States market. American financing means a common interest in the future of these undertakings, thus establishing closer ties. As a result of these and numerous other business agreements arising out of the increased volume of trade, there are closer relationships now between the two economies and Canadian exports to the United States appear to be on a more secure footing than in the prewar period. Though this security depends in part on the maintenance of reasonably high levels of activity in the United States, there is considerable evidence to suggest that on the whole Canadian exports to the American market are in a less vulnerable position than before the war.

Contributions to the Total Gain

In order to examine changes in Canada's exports to the United States in terms of physical volume, the effect of price fluctuations was removed by valuing exports in 1937-38 and 1952-54 in terms of 1947 prices. All value references in the ensuing paragraphs and tabulations are in terms of this measure.

On this constant dollar basis, Canadian exports to the United States have increased from an average annual rate of \$617 million in 1937-38 to \$1,806 million in 1952-54, a net gain of \$1,189 million. A division of total exports in both periods into 125 commodity classifications reveals gains in 118 of the 125 groups and losses in only seven. Gains totalled \$1,236 million and losses \$47 million, for a net gain of \$1,189 million. Chart I illustrates the total volume change

CHART I

CHANGES IN THE VOLUME OF CANADIAN EXPORTS TO THE UNITED STATES FROM PRE-WAR TO THE CURRENT PERIOD

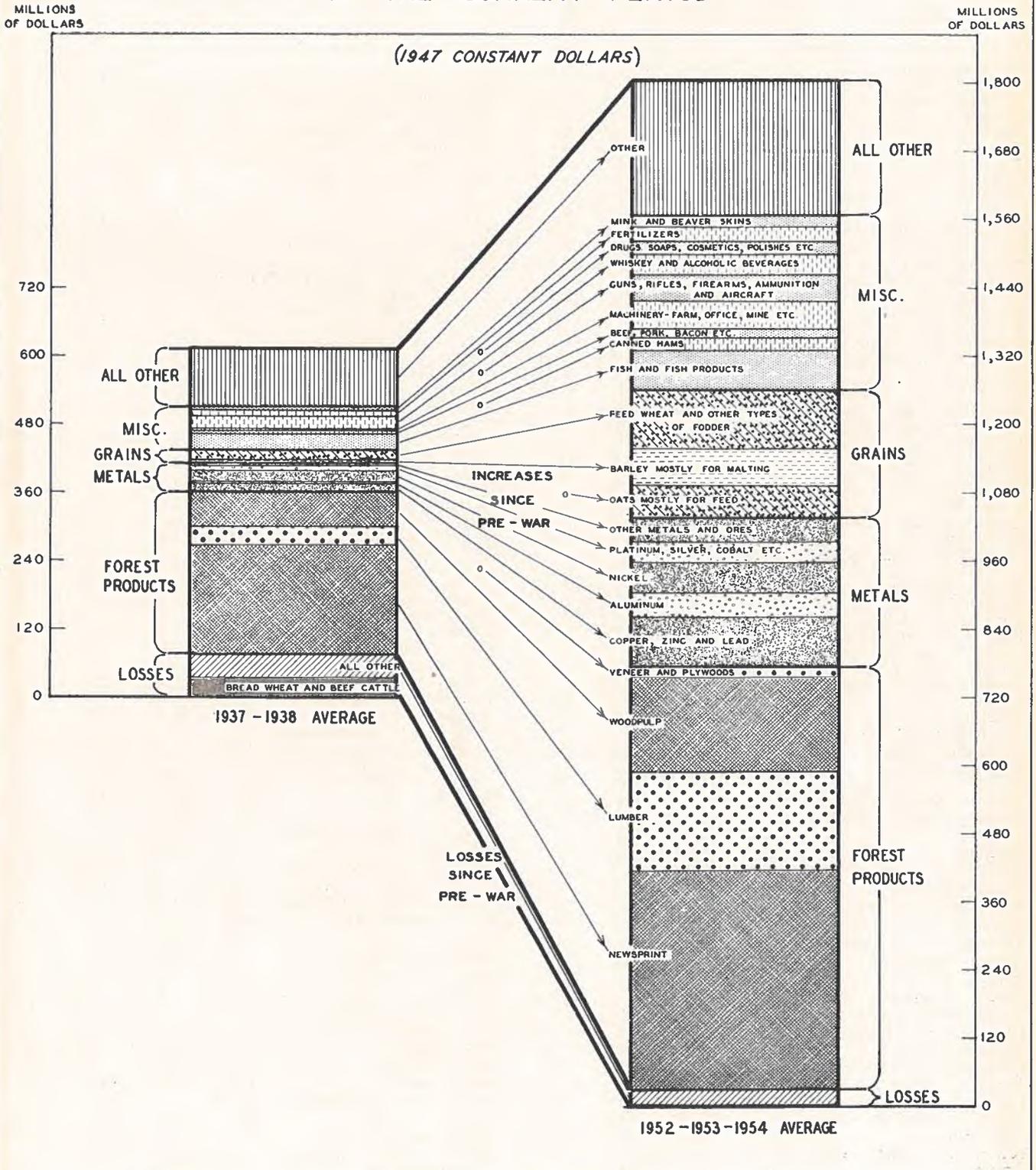


Table I
Volume of Canadian Exports to the United States

(1947 constant dollars, millions)

Commodity	Annual Average 1937-38	Annual Average 1952-53-54	Gain	Per cent of total gain	Commodity	Annual Average 1937-38	Annual Average 1952-53-54	Gain	Per cent of total gain
GAINS—in order of magnitude					Lead, metallic contained in				
Newsprint paper	192.1	387.4	195.3	15.8	ore	1.0	7.1	6.1	.5
Wood pulp other than listed —mostly mechanical pro- cessed	6.8	72.7	65.9	5.3	Settlers' effects	3.0	8.8	5.8	.5
Oats—mostly for feed .....	.1	58.9	58.8	4.8	Paper other than newsprint	2.7	8.5	5.8	.5
Barley—mostly for malting	5.3	63.9	58.6	4.7	Planks and boards—pine	4.8	10.4	5.6	.4
Planks and boards—spruce	14.8	67.8	53.0	4.3	Manufactures of aluminum	4.6	4.6	4.6	.4
Wheat for feed	44.3	44.3	44.3	3.5	Wood pulp sulphate (kraft) bleached	12.1	16.6	4.5	.4
Aluminum in bars, blocks, ingots	1.7	43.9	42.2	3.4	Brass rods, strips, tubings, bars, etc.	4.4	4.4	4.4	.4
Planks and boards—Douglas fir	6.8	46.5	39.7	3.2	Apples .....	.1	4.1	4.0	.3
Farm machinery	3.6	42.3	38.7	3.1	Pork	2.3	6.2	3.9	.3
Wood pulp, sulphite, dis- solving	31.1	29.9	27.0	2.2	Fertilizers other than listed above .....	.7	4.3	3.6	.3
Wood pulp, sulphite, and paper grade	(incl. above) 28.2	}	}	}	R.R. ties, timber squares, etc.	13.2	16.7	3.5	.3
Platinum, silver, cobalt, mer- cury, etc., mostly ores	9.3	36.0	26.7	2.2	Fruits and vegetables other than listed (berries, onions, etc.) .....	.8	4.3	3.5	.3
Nickel—fine	16.6	42.1	25.5	2.0	Iron or steel plates, sheets, strips	3.3	3.3	3.3	.3
Drugs, soaps, cosmetics, polishes, etc. ....	.7	23.6	22.9	1.9	Soda and sodium compounds Meats—muttons, frogs' legs, bologna, etc. ....	.9	4.0	3.1	.3
Copper in ingots, bars, cakes	3.9	26.3	22.4	1.8	Biscuits, macaroni, candy, tea, etc.	6.2	9.2	3.0	.2
Canned hams	22.2	22.2	22.2	1.8	Christmas trees	1.2	4.1	2.9	.2
Aircraft and parts	21.7	21.7	21.7	1.7	Peat moss	2.8	2.8	2.8	.2
Planks and boards—cedar....	3.6	24.5	20.9	1.7	Sand, gravel, stone, etc.	1.7	4.5	2.8	.2
Fish and fish products other than listed	15.4	35.5	20.1	1.6	Grass seeds .....	.2	3.0	2.8	.2
Planks and boards—hemlock .....	.5	18.8	18.3	1.5	Ferro-alloys	3.4	6.1	2.7	.2
Zinc spelter	1.0	19.2	18.2	1.5	Beaver skins	1.1	3.8	2.7	.2
Grains—other than listed (rye, soya, peas, etc.) .....	.9	18.2	17.3	1.4	Gas engines and parts— mostly of iron and steel	2.6	2.6	2.6	.2
Veneers and plywoods .....	.1	15.6	15.6	1.3	Rubber tires of all kinds .....	.1	2.5	2.4	.2
Guns, rifles, firearms, am- munition	15.2	15.2	15.2	1.2	Blueberries—fresh or frozen .....	.8	2.9	2.1	.2
Lead in pigs, refined lead....	15.2	15.2	15.2	1.2	Billets, ingots, blooms, of iron	2.0	2.0	2.0	.2
Cyanamid, nitrogen, phos- phate and n.o.p. fertilizers	8.0	21.4	13.4	1.1	Boxes, coffins, doors, furni- ture and other manuf. ....	.4	2.4	2.0	.2
Halibut, salmon, pickerel, cod	5.7	18.0	12.3	1.0	wood	3.2	5.1	1.9	.2
Mink skins	1.8	13.9	12.1	1.0	Planks and boards—birch	18.8	20.7	1.9	.2
Wood pulp, sulphite, un- bleached, strong	10.0	21.3	11.3	.9	Shingles—red cedar	1.7	3.6	1.9	.2
Zinc contained in ore	11.1	11.1	11.1	.9	Ropes, strings, oilcloth, net, elastic	1.7	3.6	1.9	.2
Whisky	24.6	35.6	11.0	.9	Synthetics and silk thread, fabric and clothing .....	.1	2.0	1.9	.2
Abrasives, artificial, crude....	4.6	14.2	9.6	.8	Electrical energy	4.8	6.7	1.9	.2
Asbestos, waste, refuse, shorts	4.0	13.3	9.3	.7	Hay	1.4	3.2	1.8	.1
Pig iron .....	.2	9.4	9.2	.7	Seeds other than those listed elsewhere .....	.8	2.5	1.7	.1
Office, mine, printing, indus- trial machinery .....	.3	9.3	9.0	.7	Alcoholic beverages other than whisky .....	.2	1.9	1.7	.1
Brans, shorts, middlings	2.6	11.3	8.7	.7	Whitefish—fresh and frozen	3.2	4.7	1.5	.1
Pulpwood—not peeled	4.9	13.5	8.6	.7	Clover seed—alfalfa	1.1	2.5	1.4	.1
Fodders of various kinds	1.4	9.9	8.5	.7	Beef .....	.4	1.8	1.4	.1
Asbestos, milled fibres	6.6	14.8	8.2	.7	Bacon, hams, sides .....	.5	1.9	1.4	.1
Iron ore	8.2	8.2	8.2	.7	Sugar products other than maple .....	.4	1.8	1.4	.1
Castings, forgings, wire, nails, cutlery of iron	1.3	8.9	7.6	.6	Clover seed—alsike .....	.2	1.5	1.3	.1
Coal, mica, petroleum (mostly crude)	4.9	12.4	7.5	.6	Clover seed—red .....	.5	1.7	1.2	.1
Cartridges for guns and rifles	7.1	7.1	7.1	.6	Seed potatoes .....	.8	2.0	1.2	.1
Prepared animal foods, glues, tankage, etc.	11.7	18.7	7.0	.6	Dairy cattle n.o.p.	1.0	2.2	1.2	.1
Nickel contained in matte or speiss	2.5	9.3	6.8	.5	Binder twine	1.5	2.7	1.2	.1
Lobster meat—fresh and frozen	5.4	11.5	6.1	.5	Copper, fine, contained in ore	8.8	10.0	1.2	.1
					Maple sugar	2.2	3.4	1.2	.1
					Books, magazines, photos, newspapers, etc.	1.3	2.4	1.1	.1

Commodity	Annual Average 1937-38	Annual Average 1952-53-54	Loss	Per cent of total loss
Aluminum scrap	.1	1.2	1.1	.1
Scrap iron	1.2	2.3	1.1	.1
Sporting goods, toys, musical and photo instruments	4.2	5.1	.9	.7
Wool rags and waste	.....	.8	.8	.7
Rubber products other than listed	.1	.9	.8	.7
Cattle for improvement of stock	2.3	3.0	.7	.7
Wool manufactures	.6	1.3	.7	.7
Acids—mostly sulphuric	.1	.8	.7	.7
Pulpwood—poplar	2.2	2.8	.6	.7
Inorganic chemicals other than soda and sodium compounds	.1	.6	.5	.7
Potatoes, except seed	.3	.8	.5	.7
Lead pipe, tube and other manufactures	.....	.4	.4	.7
Asbestos manufactures	.1	.5	.4	.7
Waste bagging and cloth of jute	.....	.4	.4	.7
Nickel oxide	.1	.4	.3	.7
Zinc dross, ashes	.....	.2	.2	.7
Wool in the grease	.3	.5	.2	.7
Waste rubber	.1	.2	.1	.7
Straw	.1	.2	.1	.7
Flax, jute, hemp manufactures	.....	.1	.1	.7
Acids, n.o.p.	1.1	1.2	.1	.7
Brass scrap	.6	.6	.....	.7
Fibre and tow of flax	.1	.1	.....	.7
Milled products other than listed	.5	.5	.....	.7
Turnips	1.8	1.8	.....	.7
Total	540.8	1,776.6	1,235.8	100.0
LOSSES—in order of magnitude				
Wheat for human use	22.6	.8	21.8	46.4
Cattle n.o.p. weighing over 700 lb. for slaughtering	13.0	2.7	10.3	21.9
Live animals other than listed elsewhere	7.3	1.5	5.8	12.3
Pulpwood—peeled	17.8	13.8	4.0	8.5
Copper wire, screening and other manufactures	7.7	5.0	2.7	5.8
Skins other than listed elsewhere—muskrat, rabbit, etc.	5.1	3.6	1.5	3.2
Telegraph, telephone poles	2.7	1.8	.9	1.9
Total	76.2	29.2	47.0	100.0
Total of products showing GAINS	540.8	1,776.6	+1,235.8	104.0
Total of products showing LOSSES	76.2	29.2	-47.0	-4.0
GRAND TOTAL	617.0	1,805.8	1,188.8	100.0

which has taken place and the proportionate contribution of major commodities to the total. Forest products, metals and grain account for \$875 million, or 72 per cent, of the net gain of \$1,189 million. The largest gain, \$459 million, is in the forest products group—made up of \$195 million in newsprint, \$139 million in lumber, \$109 million in wood pulp for the manufacture of both paper and fibres, and \$16 million in veneers and plywoods. The metals group contributes \$213 million to the total gain: \$74 million in

copper, zinc and lead; \$42 million in aluminum; \$32 million in nickel; \$27 million in platinum, silver, cobalt, mercury, etc., and \$37 million in other metals and ores. Grains show a total gain of \$181 million made up of: \$59 million in oats, mostly for feed; \$59 million in barley, mostly for malting; \$44 million for feed wheat, and \$41 million in other grains. These are offset by a \$22 million loss in bread wheat.

Other important contributions to the total gain were made in farm and office machinery, \$48 million; guns, rifles, firearms ammunition and aircraft, \$44 million; fish and fish products, \$40 million; drugs, soaps, cosmetics, polishes, etc., \$23 million; canned hams, \$22 million; fertilizers, \$17 million; mink and beaver skins, \$15 million; whisky and alcoholic beverages, \$13 million and beef, bacon, etc., \$10 million. In all, over 90 per cent of the total net gain is accounted for by the products mentioned.

Only seven major product classifications showed losses which totalled \$47 million. Wheat for human consumption and cattle accounted for \$37 million of the \$47 million.

Relative Importance of Gold

Though this statement covers only merchandise exports, the change since prewar years in the relative importance of Canadian gold production for export should also be kept in mind. If the value of gold production for export in 1937-38 were added to the value of total merchandise exports to the United States in the same period, total exports to the United States would be 47 per cent higher. If the same calculation is performed for the 1952-54 period, exports to the United States are only 6 per cent higher. Gold production in both value and volume was at about the same level in both of these periods. The large increase in both the value and volume of merchandise exports accounts for the decline in gold as a proportion of total exports.

Table I shows the value in 1947 prices for both periods of all of the 125 classifications into which total exports were divided. Differences between the two periods for each classification are also given in 1947 constant dollars, as well as the percentage of total gain or loss accounted for by each product classification. Commodities are listed in the order of the size of their contribution to the total change between the two periods.

Variation in Rates of Gain

There has been a great deal of variation in the rate of gain since the prewar period between one group of commodities and another. Total exports to the United States are 2.93 times or nearly triple the prewar volume; exports of metals are 5.28 times as great and grains 5.07 times. The rate of increase in some lines

CHART II

PERCENTAGE COMPOSITION OF CANADIAN EXPORTS TO THE UNITED STATES IN THE PRE-WAR AND CURRENT PERIODS

(FIGURES SHOWN ARE PERCENTAGES BASED ON 1947 CONSTANT DOLLARS)

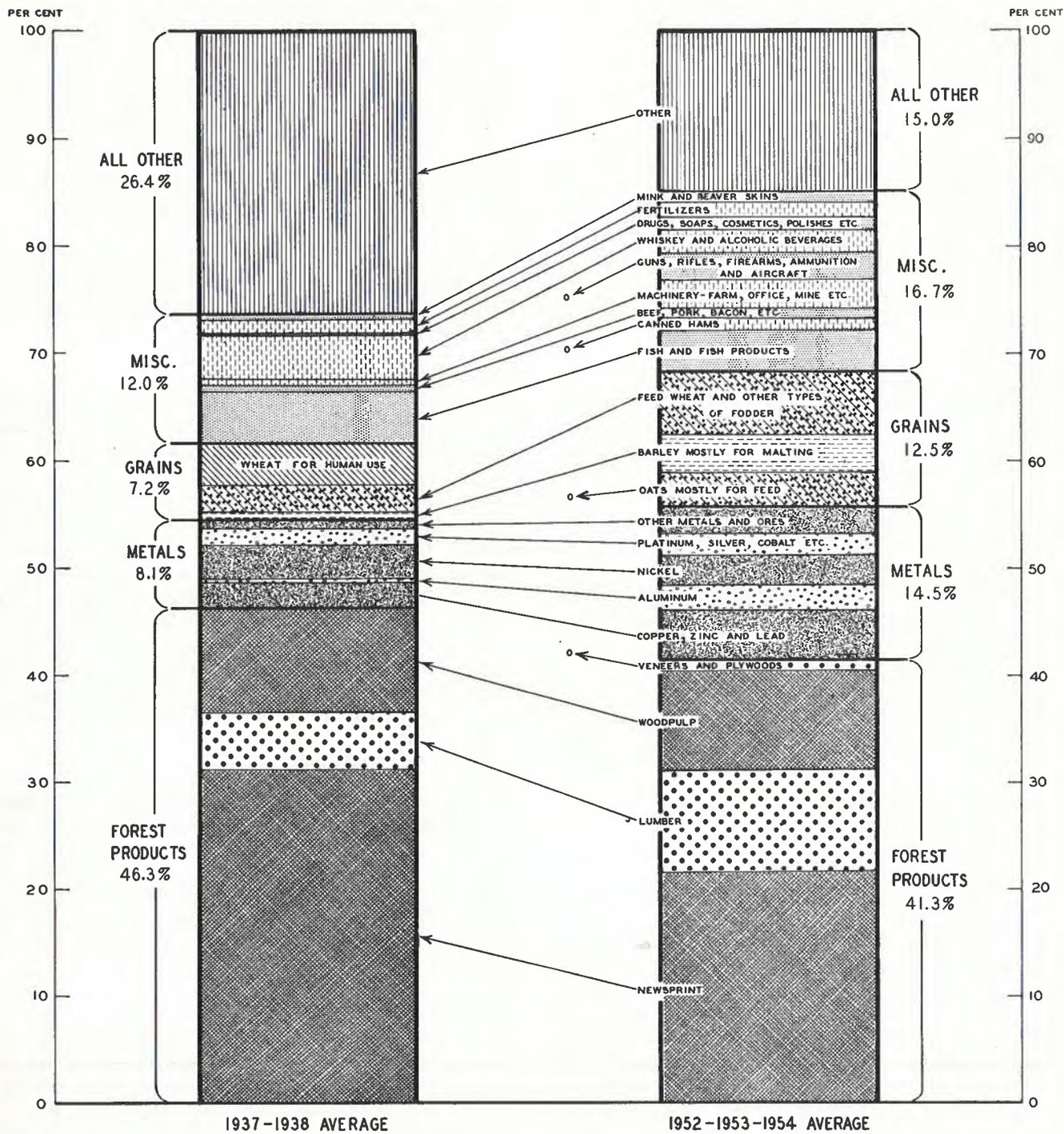


Table II
Volume of Canadian Exports to the United States

*1937-38 compared with 1952-54
(1947 constant dollars, millions)*

	<i>Annual Average 1937-38</i>	<i>Annual Average 1952-54</i>	<i>1952-54 Minus 1937-38</i>	<i>Per cent of total net gain</i>	<i>Ratio 1952-54 1937-38</i>	<i>Per cent Composition</i>	
						<i>1937-38</i>	<i>1952-54</i>
FOREST PRODUCTS							
Newsprint	192.1	387.4	195.3	16.4	2.0	31.1	21.5
Lumber	33.7	173.1	139.4	11.7	5.1	5.5	9.6
Wood pulp	60.0	168.7	108.7	9.2	2.8	9.7	9.3
Veneers and plywood .....	.1	15.6	15.5	1.3	156.0	.....	.9
TOTAL	285.9	744.8	458.9	38.6	2.6	46.3	41.3
METALS							
Copper, zinc and lead	14.7	88.9	74.2	6.2	6.0	2.4	4.9
Aluminum	1.7	43.9	42.2	3.6	25.8	.3	2.4
Nickel	19.1	51.4	32.3	2.7	2.7	3.1	2.8
Platinum, silver, cobalt, mercury	9.3	36.0	26.7	2.2	3.9	1.5	2.0
Other metals and ores	4.9	42.3	37.4	3.2	8.6	.8	2.3
TOTAL	49.7	262.5	212.8	17.9	5.3	8.1	14.5
GRAIN							
Oats, mostly for feed .....	.1	58.9	58.8	5.0	.....	0	3.3
Barley, mostly for malting	5.3	63.9	58.6	4.9	12.1	.9	3.5
Feed wheat	0	44.3	44.3	3.7	.....	.....	2.5
Bread wheat	22.6	.8	21.8	1.8	.....	3.7	.....
Other grains .....	.9	18.2	17.3	1.5	20.2	.1	1.0
Fodders of various kinds	1.4	9.9	8.5	.7	7.1	.2	.5
Prepared animal foods	11.7	18.7	7.0	.6	1.6	1.9	1.0
Brans, shorts and middlings	2.6	11.3	8.7	.7	4.3	.4	.6
TOTAL	44.6	226.0	181.4	15.3	5.1	7.2	12.5
MISCELLANEOUS							
Fish and fish products	29.7	69.7	40.0	3.4	2.3	4.8	3.9
Canned hams	0	22.2	22.2	1.9	.....	0	1.2
Beef, pork, bacon, etc	3.6	13.3	9.7	.8	3.7	.6	.7
Machinery—farm, office, mine	3.9	51.6	47.7	4.0	13.2	.6	2.9
Guns, rifles, firearms, ammunition and aircraft	0	44.0	44.0	3.7	.....	0	2.4
Whisky and alcoholic beverages	24.8	37.5	12.7	1.1	1.5	4.0	2.1
Drugs, soaps, cosmetics, polishes .....	.7	23.6	22.9	1.9	33.7	.1	1.3
Fertilizers	8.7	25.7	17.0	1.4	3.0	1.4	1.4
Mink and beaver skins	2.9	17.7	14.8	1.2	6.1	.5	1.0
TOTAL	74.3	305.3	231.0	19.4	4.1	12.0	16.9
All other	162.5	267.2	104.7	8.8	1.64	26.4	14.8
GRAND TOTAL	617.0	1,805.8	1,188.8	100.0	2.93	100.0	100.0

of manufactured goods has also been remarkably high. Large exports of farm and office machinery, guns, ammunition and aircraft, and drugs in the 1952-54 period compared with negligible exports of these items in 1937-38 explains most of this increase. However, forest products, though accounting for nearly 40 per cent of the total gain in exports to the United States in the postwar period, are only 2.61 times as large as before the war. The explanation is that newsprint constitutes a large proportion of the forest products group and exports of newsprint have only doubled.

Changes in Composition

As a result of the differing rates of gain or loss discussed in the previous section, the proportion of total Canadian exports accounted for by the various groups of commodities has changed significantly. This is graphically illustrated in Chart II. Exports of forest products to the United States, which accounted for

46.3 per cent of total exports to the U.S. prewar, now account for only 41.3 per cent of the total. On the other hand, metals have increased from 8.1 per cent of the total to 14.5 per cent, grains have increased from a 7.2 per cent share to 12.5 per cent, and the miscellaneous group shown has increased from 12.0 per cent to 16.7 per cent. The "all other" group has declined from 26.4 per cent to 15.0 per cent.

Table II summarizes in statistical form the points discussed under the last three headings. It should be kept in mind that all of these calculations have been based on constant 1947 dollars as a means of measuring changes in volume. Differences in the order of importance of the various commodities would appear if similar tables were constructed from current dollar figures or values prevailing during each of the two periods under discussion. Varying rates of change in price would then be combined with changes in volume. ●

What the Sugar Industry Buys

Cuba's 161 sugar mills constitute a \$35 million market for engineering materials, parts, and general mill supplies. Canadian manufacturers might find opportunities in this field.

G. A. BROWNE, *Commercial Secretary, Havana.*

CUBA'S BILLION DOLLAR SUGAR INDUSTRY is the world's leading producer of cane sugar. It operates 161 mills in the Island, with a total capacity of close to eight million tons, employs annually about 500 thousand people, and provides from 30 to 40 per cent of Cuba's national income. And the mills and plantations as a group are the most important importers of industrial machinery, equipment, field powerhouse and plant and mill supplies in Cuba. To make it easier to relate various items in this list of agricultural and industrial needs to the actual operation of a sugar mill, it might be well to describe the cane sugar process briefly.

The Production Process

Last year, over 38 million long tons of cane were hand-cut and milled to produce 5,234,353 long tons of sugar (this figure includes the sugar equivalent of the molasses production). The cane, dumped at the mills' intake conveyors, is shredded and passed through a series of massive crushers under great pressure to extract all possible juice. The resultant washed pulp, called *bagasse*, is then usually fed to the mills' furnaces as fuel while the juice goes on to be filtered, its acidity neutralized with lime, and then heated to near boiling to evaporate excess moisture. Passing next through clarifiers, it then goes to multiple-effect evaporators under vacuum which leave the developing sugar a heavy syrupy compound. In this form it reaches the vacuum pans where further concentration takes place and crystallization occurs.

This mixture, called *massecuite*, next passes through crystallizers, where additional sugar crystallizes on the grains already present, and then moves to the centrifugals—rapidly-spinning perforated metal containers—which spin off all of the molasses which can be mechanically removed short of the refining process, leaving the raw sugar. This light-brown sticky substance, each crystal still carrying a microscopic film of molasses, gravity-feeds into jute sacks as the raw sugar of commerce for shipment to the refineries.

The mills, geared to the cane harvest, must operate day and night during the grinding season in Cuba, usually from about mid-January into May. During the remainder of the year, mill overhaul and repairs and replacements are carried out and, to meet the needs of the mills, an extensive mill-supply business has developed in the Island.

A not unimportant part of the maintenance and heavy repair business of the mills is attended to by one or two important local foundries and engineering firms, but the great bulk of machinery repair and replacement is met by imports. Paints, small hardware

CUBAN SUGAR MILL PURCHASES ESTIMATED ANNUAL AVERAGES IN DOLLARS (161 mills)

Containers, bags, paper, thread	11,815,525
Lubricants and fuels	6,926,250
Chemicals	2,139,550
Hardware items, general	1,951,975
Mill replacements—discharge, feed, shredder, top rolls, roll shafts, etc.	1,654,550
Agricultural implements	1,272,750
Construction materials (cement, zinc roofing sheets, bricks, corrugated steel reinforcing rods, etc.	1,099,375
Refractory materials	992,525
Office supplies (mostly stationery)	881,425
Electrical supplies	805,600
Cachaza filters and replacement parts	692,400
Chains and accessories	580,450
Pumps and parts	556,225
Locomotives, wagons and parts	533,650
Structural steel	522,750
Paints	470,675
Solder, oxygen, acetylene	451,450
Centrifugals and parts	424,325
Belting	353,975
Steam turbines and parts	343,450
Boilers and parts	340,625
Scales for weighing cane and parts	325,575
Valves and accessories	296,575
Laboratory implements	271,850
Tools	212,075
Chemical fertilizers	168,250
Hose	149,500
Mill bearings	127,250
Steel cables	110,750
Basculators (car tips, tipping tables, cane unloaders, conveying machinery and parts)	108,750
Instruments and controls	99,175
Cotton tow	78,150
Differentials and parts	75,600
Crystallizers, cooling units, etc.	69,675
Evaporators and parts	19,775

generally, small tools, and fuels and lubricants are bought in Cuba.

Using as an industry sample figures recently obtained from two groups of mills representing in numerical terms and in their share of total sugar production 9.3 and 11.4 per cent respectively, a theoretical annual value for the market for mill supplies, renewals, and replacement parts can be estimated at about \$35 million. The table on page 14 indicates the average distribution of this money by commodity class and, of course, includes purchases of domestic as well as imported material although the latter form by far the greater proportion.

Principal Suppliers

A large share of the industry is owned or controlled by U.S. investment and this, plus long-established trade connections and the great dependence of Cuban industry on U.S. engineering, chiefly accounts for the fact that the United States is the principal supplier to this field. Many mills maintain purchasing offices in the United States through which all their needs are met. The Island's mill equipment is not, however, entirely U.S.-engineered; some mills use French, Belgian and German boiling house and evaporating machinery, although the most recent heavy crushing machinery is American. In replacement parts, the chief European competition currently comes from the United Kingdom in vertical engines and centrifugals. Patent expiries and the transatlantic shift of patent rights following World War II has tended, of course, to diminish the participation of European engineering in the Cuban sugar machinery market.

Tariff Favours U.S. Goods

An additional reason for the industry's American orientation in its purchases is, of course, the tariff preference favouring U.S. goods. This preference, usually about 20 per cent, does not by any means, however, embrace the entire list of normal supplies. In fact, on perhaps as much as one-fifth of the total value in the above list, the duties would be roughly equal between United States and most-favoured-nation suppliers.

By specific groups, equal rates of duty might generally be expected in valves and accessories, steel cables, steam turbines and replacement parts, agricultural implements and machinery, instruments, laboratory implements and supplies, some electrical supplies, differentials, basculators, scales and parts and fertilizers. It is not too useful, however, to generalize about this because particular items in some of the above groups may be subject to specific customs classification where preferential rates apply.

Mill overhaul and repair work is generally carried out in the late summer and fall. It is not unusual for

mills when purchasing locally to obtain extended credit against acceptances, with settlement made after the subsequent grinding season. The local commercial banks will often carry the mills' paper, discounted with them by the supplier, for as long as twelve months. Payment for direct imports, on the other hand, seems to vary considerably, according to the foreign manufacturer's or supplier's policy and the credit rating of the buying mill. It is not unknown for some foreign manufacturers with a too-rigid credit policy to demand a letter of credit from a mill of undoubted status for items of relatively small value. Sales opportunities present themselves in such cases for competitors who might overcome the tariff disadvantage through more liberal terms.

Current Market Opportunities

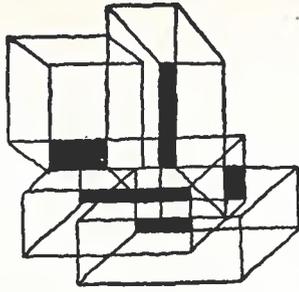
Worth particular attention is the fact that Cuban mills do not normally operate at steam pressures in excess of 250 pounds. As a result, there is a market for reconditioned boilers now being replaced in North American industry by the trend to higher operating pressures. Also noteworthy is the pronounced swing toward automotive hauling of cane. Here it is interesting to observe the steady dieselization of the private railway systems of the sugar mills where, for some time now, steam locomotives have represented one of the mills' highest-cost services.

A comprehensive list of the Cuban sugar mills together with much detailed information on the industry and its suppliers is contained in the *Cuba Sugar Year Book*, published annually by Editora Mercantil Cubana, S.A., Post Office Box 2549, Havana, Cuba. The *Manual of Sugar Companies*, published by Farr & Co., 120 Wall Street, New York 5, N.Y., lists most Cuban mills and gives details of their equipment and ownership. Would-be Canadian suppliers might find these helpful.

Air Parcel Post Services Extended

The Post Office has extended its international air parcel post service and its A.O. airmail service (printed matter, commercial papers, samples, newspapers, literature for the blind) to include the following countries: effective November 15, to Austria, Czechoslovakia, Hungary, Israel and Yugoslavia; effective December 1, to Argentina, Bahamas, Barbados, Bermuda, Haiti, Mexico, Peru, Trinidad and Venezuela; effective December 15, to British Guiana, British Honduras, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Leeward Islands, Paraguay and Portugal.

Details of rates and regulations for these services can be obtained from local post offices.



commodity notes

Australia

MINERALS—Australia produced £182.8 million worth of minerals in 1954, £10.2 million more than in 1953, and exported £58 million worth, £17.4 million less than in 1953. The decline in exports was the result of the greatly reduced amount of gold exported and a large drop in exports of pig iron and ingot steel. Lead and zinc exports made up 58 per cent of the total. Imports of minerals rose by £17 million to £38.3 million, mainly because of increased purchases of crude petroleum for new refineries. Mineral oil accounted for 94 per cent of total mineral imports—Sydney, Dec. 26.

Barbados

OUTBOARD MOTORS—The Government has voted an additional Can.\$50,000 to increase the Fisheries Revolving Fund and provide loans sufficient to add 47 powered boats to the fleet. Another 30 boats are under construction, and when the program is completed over 100 motorized units will be engaged in fishing, compared with only eight in 1953. This rapid increase should provide an opportunity for sales of outboard motors and spare parts and also for fishing gear. Canadian sales of these products to Barbados in 1954 totalled only \$5,000—Port-of-Spain, Dec. 21.

Brazil

COFFEE—During the first four months of the current crop year (July-October 1955), Brazil's coffee exports increased by 106 per cent over the same period of 1954. By October 31, coffee exports totalled 5,857,542 bags, compared with 2,837,313 bags in the same period of 1954—São Paulo, Dec. 28.

Cuba

SUGAR—The Sugar Research Foundation of New York has announced that, on the basis of laboratory results, it may eventually be possible to use large quantities of sugar to make new types of household and industrial detergents. This could be an important export outlet for Cuban raw sugar—Havana, Dec. 27.

PETROLEUM—Cuban petroleum production in the first half of 1955 reached 155,122 barrels—almost triple total 1954 production. The daily output of petroleum is estimated at about 1,200 barrels; total consumption is 55,000 barrels a day—Havana, Dec. 27.

Federation of Rhodesia and Nyasaland

MINERALS—In the first eight months of 1955 minerals produced in Southern Rhodesia were valued at more than \$36 million and the output for the year is expected to reach \$55 million, a figure attained only once before. An intensive exploration campaign is under way in Southern Rhodesia and geological specimens are being brought in by the hundreds; so far this year the government mineralogist in Salisbury has examined some 3,400 specimens for 1,450 prospectors—Salisbury, Dec. 19.

India

TYPEWRITERS—The Central Government has approved a program for the progressive manufacture of typewriters in India. This program embraces three plants, located in Bombay, Calcutta and Madras, with an eventual total capacity of 33,000 typewriters a year. The plants are already in operation and are gradually increasing the indigenous content of their production—Bombay, Dec. 20.

Indonesia

CEMENT—Indonesia expects that when the Gresik cement plant near Sourabaja is completed in September 1957, it will be able to produce 472 thousand tons of cement a year. The Gresik plant will have an output of 292 thousand tons a year; the Indarung cement plant at Padang, West Sumatra, has an annual production of 180 thousand tons. Domestic consumption of cement averages between 500 thousand and 600 thousand tons a year—Djakarta, Dec. 19.

SUGAR—Sugar production in Indonesia during 1955 is estimated at 850 thousand tons, compared with 718 thousand in 1954. Domestic consumption totals 600 thousand tons, leaving 250 thousand for export. Japan has contracted for 200 thousand tons of this surplus—Djakarta, Dec. 19.

Jamaica

CITRUS—Under an arrangement between the Governments of the United Kingdom and Jamaica, local citrus growers will receive a minimum guaranteed price for their crop for the next three years, whether it is sold or not. This price support scheme applies

to an output fixed on the basis of plantings to the end of 1954 and afterwards to the end of 1955. In conformity with this agreement, the Jamaican Government decided not to encourage further plantings of citrus after December 31, 1955, and announced that growers who extend their groves will do so at their own risk.

It was announced in London that imports into the United Kingdom of \$500 thousand worth of canned grapefruit segments would be permitted up to November 30, but that no further licences for imports of this product from the dollar area would be issued before July 1, 1956.

The current (1955-56) Jamaican citrus crop is estimated at 550 thousand boxes of oranges, 300 thousand of seedless grapefruit, 150 thousand of sweet seeded grapefruit and about 50,000 of other kinds—Kingston, Dec. 20.

Madagascar

URANIUM—The uranium sources, autunite, betafite and thorianite, are all found in quantity in Madagascar which is a major source of supply for the French Empire. A second extraction plant supplementing the one established in 1953 has come into operation and provides concentrates of 50 per cent for further processing in France. Under agreement between France and the Atomic Energy Commission, the establishment of industrial installations powered by fissionable substance is being considered—Johannesburg, Dec. 21.

Netherlands

POULTRY, EGGS—Netherlands egg and poultry exporters expect 1955 to be a record year; during the first nine months exports rose by 100 million eggs and four million kilos of poultry, compared with the same period of 1954. Domestic consumption is steadily increasing and about 39 per cent of the national egg production is sold on the home market; for poultry this figure is 22 per cent. Exports of day-old chicks are developing satisfactorily, with Italy the principal market. Up to the end of September, total exports of day-old chicks amounted to 9.5 million and expectations are that the total for 1955 will be 12 million—The Hague, Dec. 29.

Pakistan

STRAWBOARD—The new strawboard mill near Cujranwala, built by the Pakistan Industrial Development Corporation, went into production on December 1st. The mill is designed to produce from rice straw pulp 7,500 tons of strawboard and wrapping paper a year, using the Dilts hydrapulper system. It is expected that production from this

plant, and from the mills at Karnaphuli and Nowshera, will meet the country's requirements of strawboard—Karachi, Dec. 21.

South Africa

WHEAT—According to the latest report, the Union's wheat crop is estimated at 7,497,000 bags of 200 lb. This compares favourably with last year's crop of 6,617,000 bags—Cape Town, Dec. 21.

TOBACCO—Production of tobacco in the Union has not kept pace with the steady increase in consumption which is estimated at about a million pounds a year during the past 34 years. Difficulties in growing tobacco and the lower income from it compared with other types of farming has not helped the situation. Tobacco is being imported from the Federation of Rhodesia and Nyasaland to meet the shortfall in production—Cape Town, Dec. 21.

Sweden

IRON ORE—According to a preliminary agreement, the price of Swedish iron ore exported to West Germany in 1956 is to increase by 10 per cent, or by seven to eight kronor, per ton. It is estimated that deliveries next year will reach seven million tons, a slight increase over 1955—Stockholm, Jan. 5.

STEAM GENERATORS—A Swedish company, in competition with firms from several countries, has secured a large order from Chile for steam generators, which are to be installed in a new paper mill—Stockholm, Jan. 4.

United States

FUR—Louisiana was the chief U.S. fur-producing state in the 1952-53 season, with 1,531,000 pelts, according to the U.S. Department of Commerce. Following Louisiana was Wisconsin with 1,397,000 pelts, Michigan with 1,044,000 and Minnesota with 921 thousand—New Orleans, Jan. 6.

Uruguay

WOOL—Wool sales in 1955 left a carryover of approximately 45,000 bales to the new 1955-56 season. Total production was 174 thousand bales (440 kilos per bale) or about 80 million kilos, worth roughly US\$100 million. Uruguay's trade balance for the fiscal year will suffer because of this carryover and the Government invited a mission from the International Wool Federation to come to Uruguay and discuss the wool trade's export problems. The mission stayed 15 days, but the State Bank has not reported on the outcome of the talks. However, newspaper reports state that no solution was found and matters remain much as before—Montevideo, Dec. 19.

TIMBER from tropical forests

D. S. ARMSTRONG, *Trade Commissioner, Singapore.*

High-quality hardwood timber flourishes in tropical forests of British territories in South East Asia. But problems of reaching more remote stands, of computing annual growth accurately, and of high transportation costs to North America and European markets must be solved before forest industry can progress.

THE TROPICAL FORESTS of British territories in South East Asia have enormous resources of high-quality hardwood timber. Until recent years, however, not much was done to exploit export possibilities and the industry was only interested in local requirements. But in the past five years, investment, production and exports have increased markedly, particularly in British Borneo, and the outlook is promising.

The biggest obstacle confronting the timber export trade is the long haul to the big consuming markets of Europe and North America and the heavy freight rates. At present the best customers are Japan, Hong Kong, the Middle Eastern countries, and Australia.

From the point of view of forest management the chief difficulty is that no one knows how long it takes a tree to grow. In northern climates where there are well defined seasons, trees have annual growth rings which make age calculations a simple matter. In the tropics, with no more radical climatic changes than very wet and not-quite-so-wet seasons, trees do not have rings and no accurate age test has been found.

The tropical rain forests have no equivalent to the vast homogeneous stands of cedar or spruce found in temperate zones. A single square mile of jungle will contain as many as 2,000 different species, of which perhaps one-tenth are commercially important. Not only does this make extraction difficult, but the assessing of forest inventories by such means as aerial photography is also largely guesswork.

COLONY OF SINGAPORE

In spite of lack of forests, Singapore has a large production of sawn timber and plywood. There are 25 major sawmills, one large plywood factory, and several

smaller mills and woodworking plants—all Chinese-owned and operated. Sawmill output varies from 60 tons of sawn timber a day to less than five tons. Total production during 1954 was just under 175 thousand tons of 50 cubic feet and with imports from the Federation of Malaya, nearly 210 thousand tons of sawn timber were handled in Singapore during the year.

Supplies of logs are drawn from the Federation and neighbouring islands (principally Sumatra). Exports are classed as either graded or ungraded. Ungraded lumber is exported to Middle and Far Eastern markets and lumber graded under the supervision of the Government Forestry Division is shipped to Australia, New Zealand, South Africa, and the United Kingdom. A few trial shipments have been made to the United States and one of 20,000 f.b.m. went recently to Canada. It consisted of red meranti, a species similar to Philippine mahogany.

FEDERATION OF MALAYA

The reserved forest in Malaya covers an area of 12,500 square miles, of which just over 8,000 square miles are productive. Gross output in 1954 reached over 920 thousand tons. Virtually the whole industry is in the hands of comparatively small Chinese operators and three main types are produced: heavy (naturally durable) hardwoods such as chengal, medium hardwoods such as kapur, and light hardwoods such as red meranti.

The export of round and hewn logs and of heavy hardwood lumber is not permitted, except to Singapore. Sawn medium and light hardwood timber may be exported to any destination but for quality markets such as Australia and the United Kingdom it must be graded according to approved grading rules.

Because of the interdependence of Malaya and Singapore, the timber export trade must be viewed as a whole. Total exports in 1954 of graded and ungraded timber amounted to 107,111 tons of 50 cubic feet. Ungraded exports to six major (importing over 2,000 tons) and 11 minor destinations totalled 36,924 tons and graded exports to five major and 19 minor destinations totalled 70,187 tons. The value of this trade reached about M\$18 million.

Malaya's timber industry is well developed in comparison with neighbouring territories. New areas will be opened to extraction as roads are built, particularly on the eastern side of the peninsula, but there is not likely to be a startling increase in production. Resources have been catalogued as well as current survey methods allow and perhaps the only fertile field for improvement is in the sawmilling industry, which might be considered inefficient by European or Canadian standards.

SULTANATE OF BRUNEI

Timber is produced in Brunei on a small scale to meet the needs of the oil industry and the building program of the Public Works Department. Though there is plenty of virgin forest, there is a shortage of labour. In addition, as long as the oil industry provides prosperity and high government revenue, there is no incentive to develop the timber industry to its maximum potential.

Consequently, although 10,000 tons of locally produced timber is consumed annually, another 3,000 tons must be imported to meet requirements. Most imported timber comes from neighbouring Sarawak.

COLONY OF SARAWAK

Natural forest covers some 34,000 square miles, or about 72 per cent, of the total land area of Sarawak. Virtually the whole of the natural vegetation is classed as lowland tropical rain forest, consisting almost entirely of evergreens dominated by the botanical family *Dipterocarpaceae*. Nevertheless, the variety of species is estimated at 2,500, many of which are still unknown. For the working of timber, much of the forest is still inaccessible but if the internal communications of the country can be improved, most of it is potentially productive.

Some 6,000 square miles of the coastal belt, extending inland for more than 50 miles in places, is a deep peat soil. Nearly the whole of this area is still forest and because of its accessibility and the quality of some of its timber such as ramin, these swamp forests now form the chief sources of Sarawak's timber supplies.

Ramin, classed as a medium hardwood, is a clear, straight-grain, almost white wood with the valuable property of low paint absorption. It has had a remarkably favourable reception in Australia, the United Kingdom and some European countries. Little more than five years ago a trial shipment was condemned and destroyed. Now exports exceed 200 thousand tons per year and accounted in 1954 for 73 per cent of Sarawak's timber exports.

The value of the colony's exports, at slightly under M\$14 million last year, places timber third in the list (after pepper and rubber) of Sarawak's main exports. The industry could be exploited to a much greater extent if and when ways are developed to extract timber from inaccessible areas.

COLONY OF NORTH BORNEO

North Borneo has a forest estate of 7,876 square miles on the east coast between Sandakan and Tawau, which is considered a potential commercial source of timber. An equal area of forest contains valuable timber but the topography is too difficult for commercial extraction with present methods. Most of North Borneo's commercial timbers and 97 per cent of exports are of the botanical family *Dipterocarpaceae*, and three-quarters of all shipments are of the red and white seraya species. Keruing and kapur species account for another 15 per cent.

During 1954, 210 thousand tons of logs and sawn timber were exported. This was double the quantity shipped the previous year but lower prices meant that the value of exports increased only from M\$12.3 million to M\$17.4 million. Japan was North Borneo's best customer, taking 41 per cent of the timber exported. Hong Kong, Australia, the United Kingdom and South Africa were important buyers and a few trial shipments have been made to the United States and some European countries.

Until 1950 the timber industry in North Borneo was a monopoly of the British Borneo Timber Co. Ltd., which paid a royalty to the Government for all timber extracted. The monopoly arrangement was terminated five years before it was to expire by mutual consent and on payment of a sum which in effect was a guaranteed profit for the five years.

Three additional firms have signed agreements with the Government for 21-year renewable concessions. The areas vary from 300 to 550 square miles and the estimated felling cycle is 80 years. North Borneo Timber Ltd. is associated with one of the long established trading firms in the colony: Bombay Burmah Trading Corporation Ltd. has a long history of timber production in Burma and Siam; and Kennedy Bay Timber Co. Ltd. is an offshoot of a Seattle firm which has been operating in the Philippines for a number of years.

Timber production on an economic scale in North Borneo requires a major capital outlay. Shortage of labour, difficult terrain and monsoons make it necessary to build roads and use mechanical extraction methods. One company tried elephants but found them unsatisfactory away from their native lands. Supplies

of tractors, trucks, road graders, power generators, railway equipment and various kinds of machinery have all been imported.

Financially, results have been disappointingly slow mainly because the problems with which operators have

had to contend were under-estimated and also because it has not been possible to compile complete and accurate information on forest inventories. Nevertheless, from the information that is available it is safe to say that the timber industry in North Borneo has a promising future.

Indonesia's Palm Oil Industry

Outstripped only by Africa as a palm oil producer, Indonesia has rebuilt this industry, which earns over \$30 million a year in foreign exchange. Canadian purchases are rising.

W. D. WALLACE, *Commercial Secretary, Djakarta.*

AS A PRODUCER OF PALM OIL, Indonesia ranks second only to the Belgian Congo and the Cameroons, contributing more than one-third of total world output. Palm oil exports earn vital foreign exchange; in the past few years, annual proceeds from shipments abroad have averaged nearly \$30 million.

Production Now Rising

Nearly all the palm oil produced in Indonesia comes from the 250 thousand acres of European estates in northeast Sumatra. The war and the revolution that followed dealt the industry a hard blow and not until mid-1949 did production reach the stage where exports could be resumed. The majority of the estates have now been rehabilitated and with the harvest from new trees, output is once more rising. It is, however, still considerably below the prewar figure of 220 thousand metric tons a year.

The extraction of palm oil from the fruit averages approximately 17 per cent by weight but does not include oil from the palm kernel. Indonesia does not have the facilities for this latter process and the kernels have to be exported for processing. The residual pulp is used as fuel and the hard shell of the kernel for surfacing roads on the estates and sometimes for fuel.

The following table shows production of palm oil and palm oil kernels for 1938 and the years 1950 through 1954, including the first eight months of 1955:

	Palm Oil (in metric tons)	Palm Oil Kernels (in metric tons)
1938	226,668	48,036
1950	126,491	30,775
1951	121,146	29,965
1952	146,351	38,647
1953	160,569	42,377
1954	168,636	43,319
1955 (Jan.-Aug.)	105,421	26,706

Approximately 83 per cent of the palm oil produced goes to foreign buyers. The chief markets are the Netherlands and West Germany but in the last few years Japan, the United States and Canada have become customers.

In 1954 the first shipments were made to Canada and purchases rose sharply in the first eight months of 1955.

Palm Oil Markets

Exports of palm oil for 1938, 1950 and 1951 totalled 220,702, 120,121, and 97,453 metric tons, respectively. For purposes of comparison the following table shows the exports by country of destination for the years 1952, 1953, 1954 and the first eight months of 1955. The Netherlands, West Germany and Japan, the table reveals, take between 80 and 90 per cent of exports.

INDONESIAN EXPORTS OF PALM OIL

	(in metric tons)			
	Jan.-Aug. 1955	1954	1953	1952
Totals	57,927	140,062	132,171	120,173
Netherlands	25,936	92,897	108,246	83,598
West Germany	5,336	16,337	12,649	10,124
Japan	14,485	12,615	3,098	1,759
United States	2,197	8,670	3,258	301
CANADA	2,886	681	.....	.....
Italy	265	2,450	.....	8,784
Belgium	573	2,901	.....	1,701
United Kingdom	1,673	.....	.....	11,046
Other countries	4,776	3,473	2,870	2,860

Palm kernels are shipped to Europe and Japan, where the oil is extracted and used to make paints. These exports average in value between five and six million dollars a year. ●

General notes



Australia

BIG WAGE LOSS IN DISPUTES—Australians lost £1.5 million in wages because of industrial disputes in the three months ended last September, according to the Commonwealth Statistician. Over 465 thousand working days were lost because of 426 disputes, almost double that in the same period of 1954—Sydney, Dec. 29.

Bechuanaland

DEVELOPMENT PLAN—The first annual review of progress in the five-year plan for economic development of Bechuanaland shows that funds provided by the Colonial Development Corporation are being supplemented by grants in aid from the United Kingdom Government. Twenty projects are under way aimed at improving conservation methods, pastoral and grazing lands, and the water supply through deep well borings. The plan also covers improvements in communications, medical services, and native education—Johannesburg, Dec. 20.

Cuba

STEEL PLANT—Plans are now being studied for the building of Cuba's first open hearth furnace and blooming mill near Havana. Owner will be a Havana Province producer of steel reinforcing rods who supplies 30,000 tons a year to the Cuban construction industry, which is about half the national needs. The new steel mill is expected to be in production by late 1957—Havana, Jan. 2.

Hong Kong

RESERVOIR PROJECT—The Government of Hong Kong has announced plans to build another large reservoir and ancillary installations to augment the Colony's water supply. The proposed site in the southwest corner of Lantau Island is being investigated; it is believed to be the only remaining area of the Colony where a large reservoir can be located. The plans envisage a further 30 million gallons a day for the overall water supply—Hong Kong, Dec. 19.

India

ELECTRICAL GOODS FACTORY—An agreement was signed recently in New Delhi between the Government of India and a group of U.K. heavy

electrical equipment manufacturers for the establishment of a Rs.300 million state-owned factory to manufacture heavy electrical equipment. Under the 15-year agreement, maximum use is to be made of Indian engineering and other resources for the construction and operation of the factory and Indian personnel selected by the Government are to be associated with the project at all stages. Electric generators, transformers, switchgear, turbines and traction equipment will be produced. The Indian Government is to pay the British group £400 thousand in various specified instalments for their services as technical consultants—New Delhi, Dec. 16.

Indonesia

FOREIGN ECONOMIC RELATIONS—The Directorate for Foreign Economic Relations of the Ministry of Economic Affairs was formally transferred to the Ministry of Foreign Affairs on November 26, 1955. This directorate is in charge of organizing and planning foreign trade policy and of holding trade discussions with foreign countries—Djakarta, Dec. 23.

Norway

POSITION IN EPU—During August, September and October Norway had surpluses in the European Payments Union of \$4,204,000, \$1,034,000 and \$500 thousand respectively. According to the new settlement regulations (settlement of 75 per cent in gold or dollars), Norway thus reduced her debt to EPU during these three months by \$1,434,500 and received payment of \$4,303,500 in gold or dollars from the Union. By the end of September, Norway had drawn \$450.1 million of her total credit quota of \$509.6 million—Oslo, Dec. 29.

South Africa

AGRICULTURAL PRODUCTION—The gross value of the Union's agricultural products during 1953-54 was £343 million, compared with an estimated 1938-39 value of £67 million. Maize, peanut and dairy production have increased in the past two years. The maize crop amounted to 3.4 million tons in 1952-53 and 4 million tons in 1953-54; domestic consumption was approximately 2.7 million tons. Average wheat production has increased less rapidly to 600 thousand tons compared with the prewar

average of 400 thousand. The rate of increase in the production of oil seeds, notably peanuts and sunflower seed, has been phenomenal. From a harvest of about 10 thousand tons in the prewar period, production has reached 154 thousand tons in 1952-53 and 200 thousand tons in 1953-54—with a domestic offtake of 70 to 80 thousand tons a year. Sugar production has been increased from a prewar total of some 500 thousand tons a year to 670 thousand tons in 1952-53, 725 thousand tons in 1953-54, 829 thousand tons in 1954-55 and to an estimated 930 thousand tons in 1955-56—Johannesburg, Dec. 20.

FINANCE FOR INDUSTRY—Granting of registration by the Government to an acceptance and issue finance house has introduced a new factor into the short-term money market. Authorized capital of £1 million has been subscribed by domestic interests but only half the subscription has been called. The articles of association for this private finance house provide for: (a) credit aid to commercial and industrial establishments by the endorsement of bills of exchange for discount; (b) handling of short-term bills of exchange as dealers and brokers; (c) underwriting of capital issues; (d) financing of exports and imports; (e) financing of raw material purchases by manufacturers; and (f) the guaranteeing or financing of domestic transactions—Johannesburg, Dec. 20.

ELECTRICITY DEMAND UP—Prosperous economic conditions increased the Electricity Supply Commission's revenue by 19 per cent (from £15.5 million to £18.5 million) in 1954. Demand for electricity continued to increase during 1955, forcing the Commission to ration power in some areas. At the end of 1954 generating capacity of the Commission's power stations was over two million kilowatts, with an additional 730 thousand kilowatts of plant under construction or on order—Cape Town, Dec. 21.

Sweden

PULP AND PAPER MILLS—A number of Swedish wood pulp and paper mills have recently been authorized to build extensions to their mills. One new factory for sulphate pulp will be built at Monsteraas, at a cost of about 29 million kronor, and will be completed within 2½ years. Two other firms are planning extensions to mills costing well over 5 million kronor—Stockholm, Dec. 23.

MINING DEVELOPMENT—The Grangesberg company has decided to resume operations in the iron ore deposits at Strassa and has applied for permission to build 360 flats on its property in the neighbourhood of Stora. The company plans construction that will make possible a yearly production of 430 thou-

sand tons of ore with 70 per cent iron. Investments are estimated at about 50 million kronor. The ore will probably be transported in tunnels to Stora, loaded on a railway and shipped out from Oxelosund. The harbour there is to be expanded to meet the increased export of ore and also timber—Stockholm, Dec. 23.

United States

BUSINESS PROSPECTS BRIGHT—A record fourth quarter for 1955 and good business well into 1956 is indicated for U.S. business in recent reports. Inventories are substantial, but not because of diminishing sales; commodity prices are showing more stability, and employment is at its highest point since mid-1950. Confidence in the future is reflected in forward planning which involves substantial capital investment—New York, Jan. 5.

DETROIT BANKING—Detroit is the third largest banking centre in the United States, exceeded only by New York and Chicago, and is expected to strengthen its hold on that position when year-end reports are published. Since 1946 Detroit has climbed from sixth place as a banking centre, passing Boston, Los Angeles and Philadelphia by 1949. Today it is 70 per cent ahead of Boston which it trailed by 6 per cent in 1946. In the first 10 months of 1955, cheques drawn on demand deposit accounts of Detroit banks totalled \$59.5 billion, 22 per cent higher than the figure for the same period in 1954. Closest approach to this rate of increase, among leading banking centres was the 18 per cent rise recorded by Pittsburgh. During the ten months Detroit banks handled 3.6 per cent of the checking volume of the nation's 344 largest banking centres—Jan. 6.

STEEL WAGES—Production, employment and wages are booming in the steel industry. September's average hourly pay figure at \$2.602 is a new high for the industry and the total payroll for the first nine months of 1955 is likely to better by more than four per cent the previous record set during the first three quarters of 1953. The number of workers has also increased each month of 1955—New York, Jan. 5.

FOOD LABELS—Famous food labels are finding their way into more and more toy cooking sets. About a dozen food processors and toy manufacturers working together are putting miniature packages of real foods and mixes into some 38 cooking sets designed to educate the younger generation while making them "brand-name" conscious. With play dishes and utensils, recipes and simplified cookbooks daughter can imitate mother now, and she may remember the brands when she is buying for her own family in later years—New York, Jan. 5.

Canada in Foreign Markets

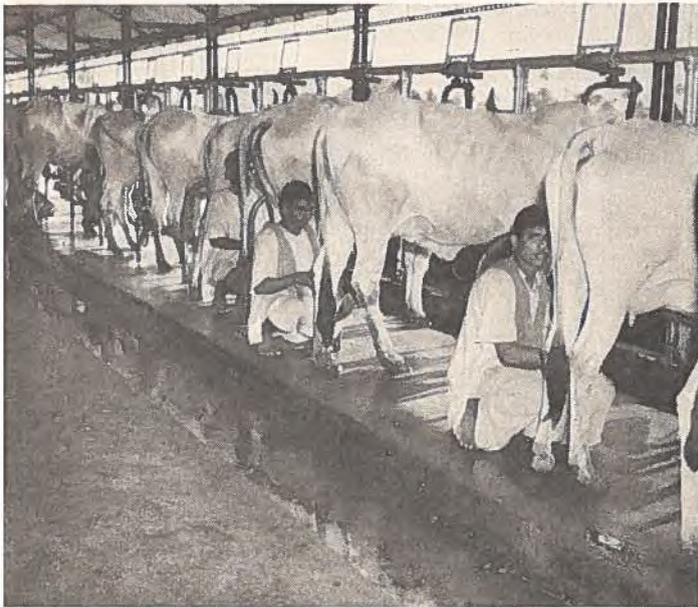


In Australia—On Victoria dock, Melbourne, part of a shipment of Canadian newsprint is rolled to the trucks which will carry it to the waiting presses of the Melbourne "Herald".

Canadian exporters are invited to contribute to this series photographs of their products in use or on sale in foreign markets. Photographs should be adequately captioned, protected for mailing, and addressed to: The Editor, "Foreign Trade".



In Brazil—Technicians at the National Cancer Service in Rio de Janeiro carefully examine through a protective screen radium needles which have recently arrived from Canada.



In India—The modern Bengal State Dairy Farm is equipped with metal stanchions, water bowls and feed and manure carriers manufactured by a Canadian company.



In Portuguese West Africa—Agricultural machinery made in Canada has been brought in to open up and prepare this virgin land for cultivation and planting to various crops.



This picture gives a partial view of the South Water Market in Chicago, which consists of six buildings, each with three floors. The fruit and vegetable jobbing market for metropolitan Chicago and the surrounding areas, trading is done from sample on the ground floor; upper floors are used for storage.

How Chicago Sells Fruits and Vegetables

Efficient methods of handling and trading in fruits and vegetables have made Chicago centre of great market for these commodities. Canada supplies about one per cent of produce sold there, but this outline of facilities and services offered may encourage more Canadians to use this marketplace.

DAVID M. W. HUMMEL,
Office of the Consulate General, Chicago.

CHICAGO has become one of North America's main centres for dealing in fruits, vegetables and allied products. Complicated but efficient trading, communication and handling institutions have grown up there to provide for the orderly, speedy and economic dispersal of fruits and vegetables. These facilities serve not only the six million people in metropolitan Chicago but also the much wider consumer market reached directly from Chicago by an extensive industry dealing in straight carlot quantities shipped to eastern and southern cities.

Chicago is thus a crossroads where products of farms all over the continent can be inspected for quality, held, unloaded and traded. It also provides a fluid cash market through which the process of supply and demand can, with a minimum of confusion, influence cash prices. These prices, which generally reflect very fairly economic influences in the market, affect and help to balance produce prices all over North America. A futures market in such commodities as onions, potatoes, eggs and so on permits producers and processors to protect profits by hedging operations. Trading and rail diversion facilities in Chicago allow fruits and vegetables from the north, midwest, south, southwest and west to be sold to eastern buyers while they are rolling, thus speeding considerably the orderly marketing and delivery of perishable produce.

Physically, the Chicago Fruit and Vegetable Market is made up of carlot markets, an auction market, a jobbing market and a futures market.

Carlot Markets

The various carlot markets have rail yards with a total capacity of about 3,000 cars. The smaller yards are owned independently by individual railroads and are generally devoted to carlot sales of specialized commodities, such as juice grapes or Christmas trees. One railroad operates a 500-car yard which is devoted exclusively to the specialized carlot potato and onion trade.

The Chicago Produce Terminal, largest of the carlot yards, is a combined venture of 31 railroads and has a capacity of 2,257 cars of fruits and vegetables. Tracks are separated by concrete driveways which give access to cars for inspection and unloading. It is equipped with sorting and loading platforms for cars that have to be "reconditioned" and with a system of truck-conveyed ice-crushers and conveyors which blow snow-ice over the loads in the cars and replenish supplies of chunk ice in the bunkers of the refrigerators. Cars are grouped in the yard by commodity for efficient handling, inspection and trading. One section is devoted to watermelons and juice grapes in season and another to what is called "wet stuff"—the commodities that are refrigerated, such as lettuce, carrots, celery, cucumbers, beans, broccoli and cauliflower. A third

is devoted to fruits, such as citrus, plums, grapes and apples, and another very large section to potatoes and onions. Trading rooms and an extensive loudspeaker system which pages dealers all over the yards are maintained. Batteries of telephones placed throughout the area facilitate business and the Terminal employs an extensive clerical staff for prompt handling of all paperwork involved.

Auction Market

The Auction Market is mainly devoted to fruits. It is located next to the Chicago Produce Terminal, the holding yard for its supplies. The auction house, which is 80 feet wide and 1,000 feet long, has its own rail and truck-spotting facilities from which cars and trucks are unloaded nightly on the display floor. Samples are unboxed and made ready for inspection in the early morning; catalogues are printed showing each lot by label and variety and identifying lots by the cars of origin. Before going to the auctioning room, traders have a good opportunity of inspecting and of noting on their catalogues the advantages and disadvantages of each lot for the specific purpose required.

As in auctions generally, trading is done under the urging of the auctioneer. The agent controlling the merchandise offered sits with the auctioneer and signifies acceptance, but he is privileged to withdraw the offering if the price is unsatisfactory. An interesting feature is that, though the buyer has until the succeeding Wednesday to pay for the merchandise, the auction company remits in full on the day of trading to the seller. Auction charges range from 1½ to 2 per cent of the sales price and there are terminal charges for the use of rail spotting and auction floor facilities for display that range from four to six cents per package. Between 8,000 and 10,000 cars are handled annually and in tonnage the market normally rates second to New York, although Philadelphia is close behind Chicago.

South Water Market

The well-known South Water Market constitutes the fruit and vegetable jobbing market for metropolitan Chicago and surrounding areas. Facilities consist of a group of six buildings containing 166 units or stores, each of which has three floors and a basement equipped with large freight elevator. Brine is piped to the basement for refrigeration and is available if desired on a meter service basis. Several large cold storage plants adjoin the market and there is a small railroad holding yard with a capacity of approximately 40 to 50 cars, suitable for team track operations. The market is approximately 25 years old and was built at a cost of some \$17 million when trading was transferred there from the south bank of the Chicago River in the heart of the Loop area. Original cost of units was \$6,000 with corner units going for \$9,000; values have

increased appreciably since. Many firms use several units but, on the other hand, many single units are occupied by several firms.

Trading is done usually from sample on the ground floor and in most instances the firms use upper floors for offices and third floors and basements for storage. There is a sizable industry in the market in consumer-size repackaging of tomatoes, garlic and Brussels sprouts and some firms employ a floor for this purpose, usually equipped with extensive conveyor devices and washing equipment. Some units have elaborate and expensive tomato ripening rooms through which move hundreds of cars of Mexican and domestic tomatoes under moisture and heat control, turning "greens" into "ripes" as demand requires. There are many basement banana ripening rooms, equipped to box pack the "hands" from the stems.

In the jobbing market about 200 salesmen do the selling during the morning, most actively between 6.00 A.M. and 9.30 A.M. Displays of samples from the cars are available on the floors for buyers to examine. For trucked commodities, much selling is done direct from the trailer-truck which is backed into the store platform, furnishing a supplemental store-room. Much of the rail tonnage is trucked to the store from the carlot terminal, but large lot sales are delivered direct from the car door.

The market is managed by a dealers' association into which monthly dues are paid. The association maintains sidewalks and supervises street cleaning, sanitation and policing. It also operates a credit association for approved buyers who qualify in responsibility and financial standing. Street purchases must be settled by the Tuesday succeeding the day of purchase.

Jobbing trading is reported daily by personnel of the United States Department of Agriculture who interview the salesmen while the trading is in operation; samples are examined to assure accuracy of description of quality and condition. The trading price is made more useful by associating it with information on the state of origin, type of package, "consist" within the package, grade or quality and condition, and similar pertinent facts. In addition an attempt is made to describe the "feel" of the market compared with that of the previous day.

Mercantile Exchange

The Chicago Mercantile Exchange provides facilities for the orderly trading in contracts for future delivery and acceptance of delivery of onions, potatoes, apples, eggs and butter. Its direct value to Canada is minimized by the fact that trading rules require most of the above commodities for delivery pursuant to contracts to be grown domestically. However, the Exchange exerts considerable indirect influence on Canadian fruit and

vegetable prices because of its general stabilizing and other effects on United States prices for these commodities. General speculative and hedging transactions are carried on.

The Agricultural Marketing Division of the United States Department of Agriculture maintains a highly efficient service for reporting daily on all commercial phases of the Chicago Fruit and Vegetable Market. Daily bulletins cover all futures quotations, cash transactions at the carlot, auction and jobbing levels, together with an indication of volume, of high, low, and median prices, and comment on the daily character of the market as it affects about 80 varieties of fruits and vegetables. Other daily reports show

receipts, diversions, and unloadings of various produce. In all these news services, states or countries of origin, size and quality are indicated.

Although the Canadian contribution to the Chicago Fruit and Vegetable Market constitutes less than 1 per cent of the volume of the market, Canadian turnips, rutabagas, Christmas trees, blueberries and apples are popular and important arrivals at Chicago. Other species received from Canada during 1954 included cabbage, cauliflower, celery, cherries, cucumbers, lettuce, pears, potatoes and tomatoes, which made up a total contribution of over 800 cars to the Chicago Fruit and Vegetable Market in that year.

Iron Ore for United States Mills

E. H. MAGUIRE, *Commercial Secretary, Washington.*

With steel plants absorbing more and more iron ore and domestic supplies going down, the U.S. must rely increasingly on imports. Canada will become a major supplier, with forecast exports to the U.S. of 38 million tons a year by 1970-75.

THERE IS GENERAL AGREEMENT in the United States that domestic production of iron ore has reached a plateau from which it will recede gradually in the years to come. However, domestic requirements will increase steadily to match the expected growth in steel manufacturing capacity, and these additional supplies will come from sources outside the United States. Canada will become increasingly important as a source—probably the chief outside source. The United States Bureau of Mines estimates that Canadian shipments of iron ore to this country will rise steadily to an annual rate of 38 million tons by 1970-75. This figure will represent about 21 per cent of estimated total U.S. requirements at that time.

The United States by no means lacks iron ore reserves: the measured, indicated and inferred reserves of "direct shipping ore and concentrates by present methods of beneficiation" were estimated at 6,160 million tons as of January 1, 1950. But many of the known high-grade deposits are approaching the mined-out

stage; others are too remote from steel-producing areas for economical transportation. Measured reserves of "direct-shipping ore and concentrates" in the Lake Superior region in 1950 totalled 1,124 million tons, of which 912 million tons were in the Mesabi range. In addition, there are reserves of low-grade deposits estimated as high as 60,000 tons which cannot be extensively mined under the present cost structure. This means that high-grade deposits located outside the borders of the United States must be used. The sub-grade deposits (under 50 per cent iron content) are, of course, available in the event that foreign sources of supply are cut off and, failing this, improvements in beneficiation techniques may some day make some of these deposits economically attractive. Considerable capital has already been invested in producing taconite concentrates from the "unlimited" deposits of the Lake Superior region, and further investment of this type is expected as time goes on.

Domestic Supplies Dwindling

The all-time peak of United States iron ore production was reached in 1953—118 million tons. In 1954, production slipped back to 78 million tons because of reduced activity in the steel-producing industry, but output in 1955 may surpass even that of 1953. Up to the end of August 1955, production equalled 67.5 million tons, just ten million tons less than for

the whole of 1954. This high rate of output, it is forecast, will continue for the next twenty years but constant improvements in production methods and beneficiation techniques will be necessary.

The Lake Superior region, particularly the Mesabi range, has been the major source of iron ore supply in the United States. In fact, this region supplied 80 per cent of the estimated 3,716 million tons produced in the United States up to the end of 1954. It is expected that it will continue to be the major supplier but more costly mining methods will have to be pursued. For instance, open-pit production, currently at the annual rate of 50 million tons, is expected to decline steadily to an annual rate of five million tons by 1975. Underground production will continue at approximately 20 million tons a year and production of concentrates from lower-grade ores will be maintained at 30 to 35 million tons a year. Taconite concentrates, with annual output projected at 30 to 40 million tons, will supply the needed fillip. Production of these is only just getting under way.

Consumption Still Rising

It is estimated, perhaps conservatively, that annual consumption of iron ore in the United States, currently about 140 million tons, will expand gradually to about 180 million tons by 1975. At that date, steel capacity is expected to be 160 million tons compared with 126 million tons at the present time. If ample supplies of scrap steel do not continue to be available, then iron ore requirements will be correspondingly higher.

Over the next twenty years, United States iron ore exports are expected to remain at about four million tons a year and most of this tonnage will be shipped, as it is today, to Canadian steel mills in the Great Lakes region.

Where Imports Originate

Imports of iron ore into the United States have traditionally played a minor part in the overall supply picture but as time goes on, they will become increasingly important. It is forecast that by 1975 imports will supply 37 per cent of requirements; in the period 1943-47, they represented less than two per cent of requirements (average annual imports, 1.9 million tons). In 1948 imports totalled three million tons and by 1952 they reached five million. There was a big jump to 11 million tons in 1953 and to 15 million tons in 1954. The estimate for 1955 is 23 million tons and it is forecast that annual imports will reach 45 million in 1960, 53 million in 1965, and 68 million in 1970-75.

At the present time, the most important suppliers are Canada and Venezuela, and to a lesser extent, Brazil, West Africa and Sweden-Norway. The additional

future supplies are expected to come from West Africa, Venezuela and Canada, particularly the two latter. Imports from Brazil currently run at an annual rate of about one million tons, but are expected to increase to an annual rate of two million tons by 1960 and level off at that figure. On the other hand, imports from Venezuela, currently at the annual rate of six million tons, are expected to increase to 13 million by 1960, 15 million by 1965, and to a maximum of 20 million by 1970. The Venezuelan deposits are richer in iron content than the Canadian deposits and can be worked the year round. The new iron ore properties in Liberia and Sierra Leone are expected to increase shipments to the United States from the present annual rate of two million to four million tons by 1965, and then remain at that level. Shipments from Sweden-Norway are expected to be maintained at the traditional level of about two million tons a year. Postwar shipments of iron ore from Chile to the United States were two to three million tons a year, but this movement has now all but disappeared because of the growth of the Chilean steel industry.

Canadian Ore Sales

The movement in quantity of Canadian iron ore to the United States is a comparatively recent development; up until 1953 it consisted of only about two million tons each year from the Michipicoten district. Following the development of the Steep Rock properties and the Quebec-Labrador field, 1954 shipments

UNITED STATES POTENTIAL IRON ORE SUPPLY

(millions of gross tons)

	1950	1951	1953	1955	1960	1965	1970	1975
Total domestic supply	97.8	116.4	118	129	129	118	115	115
Foreign supply								
Canada								
Quebec-Labrador				5	15	20	30	30
Steep Rock				3	5	5	5	5
Michipicoten	1.9	2.0	2	1	2	2	2	2
Other				1	1	1	1	1
Latin America								
Brazil	0.7	1.0		1	2	2	2	2
Chile	2.5	2.8						
Venezuela		0.6	6	6	13	15	20	20
Other	0.2	0.2		1	1	1	1	1
Africa								
Liberia and British West Africa	0.2	0.4	1	2	3	4	4	4
Other	0.7	0.6	1	1	1	1	1	1
Europe								
Sweden-Norway	2.0	2.5	2	2	2	2	2	2
Total foreign supply	8.2	10.1	12	23	45	53	68	68
Total supply	106.0	126.5	130	152	174	171	183	183

(Source: United States Bureau of Mines, based on present industry plans and other available information.)

to the United States totalled just over three million tons. In 1955, shipments may amount to ten million tons, including about three million from Steep Rock and about five million from Quebec-Labrador. Total annual exports of Canadian iron ore to the United States are expected to touch 23 million tons by 1960, 28 million tons by 1965, and 38 million tons in 1970-75. By that time, Quebec-Labrador annual shipments will probably have reached 30 million tons, up from 15 million tons in 1960 and 20 million tons in 1965. Steep Rock shipments are expected to attain their peak by 1960 at five million tons and will be maintained at that level. The Michipicoten district will probably provide the U.S. with a steady two million tons a year and other areas with about one million.

Shipping Pattern Changing

The opening of the St. Lawrence Seaway is bound to bring about marked changes in the pattern of shipping iron ore. In addition to the traditionally heavy movement from Duluth to Ashtabula on Lake Erie, a distance of 876 miles, large quantities will be shipped from Seven Islands to Ashtabula, a distance of 952 miles. Seven Islands ore will continue to move by sea as it does at present to the Philadelphia-Baltimore area, which is the main unloading area for imported ores. When the Seaway is opened, a portion of these foreign ores will be shipped directly to the Lake Erie region.

These estimates, forecasts and conjectures, for what they are worth, are contingent upon the world remaining at peace, the continued availability of reasonably priced foreign ore to the United States steel industry, the evolution at a normal pace of production and beneficiation methods and techniques and, finally, the continued expansion of the United States economy. Any interference with outside supplies because of war or other contingencies would force the development of domestic low-grade deposits at whatever cost. And, of course, the discovery of a revolutionary beneficiation method which would permit the extensive and economical exploitation of low-grade deposits might result in an upsurge of domestic production, possibly at the expense of foreign ore. ●

Information contained in this report was drawn largely from the following sources:

- U.S. Bureau of Mines Market Reports, 2327 and 2357*
- " " " " Iron Ore Reports 144-151 inclusive*
- " " " " Mineral Facts and Problems, Bulletin 556*
- " " " " Mineral Year Book 1952, Volume I*

Trade Commissioners on Tour

A. B. BRODIE, Canadian Trade Commissioner, formerly in Leopoldville, Belgian Congo, began his Canadian tour on January 9. His itinerary is:

Toronto—Jan. 18-28
 Hamilton—Jan. 30
 St. Catharines: Welland: Fergus—Jan. 31-Feb. 1.
 Winnipeg—Feb. 6-8
 Ottawa—Feb. 13-17

J. C. DEPOCAS, Canadian Trade Commissioner in Guatemala City, Guatemala, begins his Canadian tour on January 30. His itinerary is:

Vancouver—Jan. 30	Brantford—March 9
Calgary—Feb. 13	Hamilton—March 12-13
Winnipeg—Feb. 15-16	Kingston—March 14
Toronto—Feb. 20-March 2	Halifax—March 19-20
Windsor—March 5-6	Saint John—March 21-22
London—March 7	Montreal—March 26-April 13
Kitchener—March 8	

C. M. FORSYTH-SMITH, Commercial Secretary in Sydney, Australia, begins the western part of his Canadian tour on January 30. His itinerary is:

Winnipeg—Jan. 30-Feb. 1	Calgary—Feb. 3-4
Regina—Feb. 2	Vancouver—Feb. 6-18

Businessmen in the various centres may get in touch with these officers through the Board of Trade in Brantford, Halifax, Montreal and Saint John; the Chamber of Commerce in Calgary, Fergus, Hamilton, Kingston, Kitchener, London, Regina, St. Catharines, Welland and Windsor; the Canadian Manufacturers Association in Toronto and Winnipeg, and the Department of Trade and Commerce in Ottawa and Vancouver (355 Burrard Street).

Tours of Territory

M. R. M. DALE, Commercial Secretary in Cairo, Egypt, will visit the Sudan, Ethiopia, the Somalilands, Aden, Yemen and Saudi Arabia in February.

K. F. NOBLE, Canadian Trade Commissioner in Johannesburg, will visit Mauritius during the first quarter of 1956.

A. P. SAVARD, Commercial Secretary in Bogotá, Colombia, will make a two-week tour of Ecuador beginning in the last week of January.

Businessmen who would like these officers to undertake assignments should get in touch with them at their posts as soon as possible.

The Market in Sweden

With high average purchasing power and good wages because of industrial growth, Swedes are buying more foreign goods. Canadian exports up in 1955 and prospects good for 1956. Here is up-to-date information on this promising market.

L. A. CAMPEAU, *Commercial Secretary, Stockholm.*

WITH ONE OF THE HIGHEST STANDARDS OF LIVING IN EUROPE and rapid industrial progress, Sweden offers Canadians a good market for both raw materials and processed products. Since Swedish dollar restrictions were eased in October 1954, Canadian exports have climbed. In the first nine months of 1955 Canada shipped 164 different items with a total value of over \$5½ million, compared with \$3½ million for the entire year of 1954.

Higher wages, following the rapid industrial progress of the last thirty years, have given the Swedish people high average purchasing power. Private consumption expenditures in Sweden rose from approximately 15 billion kronor in 1946 to 26 billion kronor in 1954. One Swede in three owns a radio and at the beginning of 1955 one out of every 13 owned a car.

What Sweden Buys

Swedish foreign trade is large in relation to the population; in 1954, it worked out at a per capita value of 2,420 S.kr. including earnings from shipping. The growing industrialization of the economy requires the import of many raw materials and semi-finished products such as fuel, machinery and chemicals. High on the import list too is agricultural produce which for reasons of climate cannot be grown in Sweden. Various other commodities are imported to supplement her own production—fruit, fish, vegetables and oilseeds. West Germany is Sweden's chief supplier, followed by the United Kingdom, the United States and Norway. Canada does not appear among the first fifteen.

Canadians supply Swedish buyers with numerous raw, semi-processed and manufactured goods. Leading imports into Sweden from Canada are rye, auto tires, edible offal, iron ingots, aluminum, nickel, asbestos, fire brick, synthetic resins, polystyrene, and drugs and chemicals. The great increase in Canadian exports in 1955 resulted from larger sales of rye, tires, aluminum, nickel, and polystyrene. Canada ships approximately 150 various other items, some in considerable quantity.

Sweden has a large import surplus. In 1954 she imported 9,192 million kronor worth of goods and

exported 8,196 million kronor, thus giving an import surplus of 996 million kronor. During the period January-September 1955, imports totalled 7,517.6 million kronor, or 897.2 million kronor more than in the same period in 1954. The import surplus during the first nine months of 1955 was 1,093.5 million kronor, compared with 744 million kronor for the corresponding period in 1954.

Several items freed from import licensing requirements by Sweden in 1954 are important to Canada. The list includes various raw materials, foodstuffs, machinery and many consumer goods. On the other hand, a number of products remain under import control, including wheat and coarse grains.

The increase of industrialization in Sweden has meant that its 7.5 million people are becoming more urban, at the expense of the rural life. The population is growing at the rate of ten per 1,000 a year, primarily because of the drop in death rate, for the birth rate is also decreasing. The table of private consumption given below shows they are tending to spend less on food and clothing, in favour of vehicles and rent.

PRIVATE CONSUMPTION

	1954 (millions of kronor)	1954 (per cent)	1954 Index (1946=100)
Food and beverages	10,526	40.5	113
Rents	2,251	8.6	146
Fuel and light	1,195	4.2	123
Clothing, etc.	3,636	14.0	112
Furniture and other durables	1,874	7.1	119
Vehicles, etc.	1,662	6.4	415
Fares	1,123	4.3	115
Medical and other personal care including domestic services	1,588	6.1	116
Other	2,327	8.8	130
Total	26,182	100.0	124

WAGE LEVEL—MINING AND MANUFACTURING

(Index 1948 = 100)

	1948	1950	1952	1953	1954
Men	100	107.5	154.3	161.8	168.9
Women	100	107.3	152.5	158.7	165.4

Source: Konjunktur laget—Hosten 1955.

Swedes are quality minded—a characteristic that stems from their industry, which stresses specialization and high quality rather than mass production and low prices. Concern with quality naturally applies to imports, a fact which Canadian companies who are anxious to enter the Swedish market should remember. Packaging is also important. Even if an article is in itself high quality but is packed in an unsuitable way, it may be difficult to sell. Improper packing, in addition to annoying the importer, may add extra expense. Expensive packing is always a source of minor irritation to Swedish buyers.

Meeting Competition

Factors other than quality and packaging are important. The keen competition brought on by the dollar liberalization measures of 1954 has meant that other factors, such as payment and delivery conditions, price, and time of delivery, mean more and more to Swedish importers in their choice of source of supply. Payment conditions have gradually become more favourable to them; the normal terms today are cash against documents. Credit terms vary in different trades, but payment by letter of credit is accepted only in exceptional cases. Business standards in Sweden are high and the percentage of bad debts low. With the existing

competition, a small price difference can be of great importance in the choice of markets. The price must of course be weighed in relation to quality, payment conditions, etc., and for this reason the lowest offer is not always the most acceptable.

Swedish importers are usually men of considerable experience in international trade, accustomed to corresponding in several languages and to calculating in various currencies and systems of weights and measures. The metric system should, however, be used wherever possible, both for weights and measures. The use of the metric system and of Swedish currency is in fact strongly recommended in view of the increasing competition from foreign users of the metric system.

Another fact which exporters do not always consider is the value of a personal study of the Swedish market. As mentioned before, Swedes stress quality, presentation of the goods, and packaging. Experience has shown that exporters who work the Swedish market personally and adapt themselves to these requirements achieve better results than those who export their product to Sweden as one country amongst others. Technical men as well as salesmen should examine the market if good sales are the goal. It is only by studying the market through personal contact that business will grow. ●

trade and tariff regulations

France

FIRST POSTWAR DOLLAR LIBERALIZATION—The French Government announced on January 3rd the freeing from import restrictions of about 11 per cent of imports from Canada and the United States, on the basis of imports during 1948. The new measure lifts all restrictions on over 60 raw materials and 150 manufactured products, including certain spare parts.

Commodities featured in the liberalization of particular interest to Canada are raw furs, pulpwood, pulp, periodicals, certain manufactures of aluminum, copper alloys, aluminum and copper scrap, combines with over 16-foot sweep, and rice combines. A more complete list will be published in an early issue of *Foreign Trade*.

This measure has been well received by French importers who regard it as a significant first step on the road to dollar liberalization. The hope is that

the freeing of these imports will improve trading conditions for Canadian exporters, but it should be noted that the commodities involved are largely those on which the import licensing policy has been a liberal one, as far as purchases from Canada and the United States were concerned. In addition, imports into France of some of these goods are not expected to increase substantially because of world shortages or because of cheaper sources of supply outside North America—Paris, Jan. 5.

Federation of Rhodesia and Nyasaland

IMPORT CONTROLS FIRST HALF 1956—Cabled advice has been received from the Canadian Trade Commissioner at Salisbury that the Federal Government has recently announced its program for the import of goods from dollar sources for the first half of 1956.

Currency allocations have been established for the following goods; for comparison, allocations are given for the previous six-month period. Although allocations are given in pounds sterling, the equivalent amount in dollar exchange is available to pay for imports.

	Currency Allocations	
	Jan.-June	July-Dec.
	1956	1955
	£	£
Wheat	225,000	50,000
Textiles for manufacturers (chiefly rayon)	100,000	No quota
Commercial and passenger vehicles (not yet an- nounced but expected to be approximately)	640,000	470,000
Government departments, commissions and railways	100,000	219,000
Ministerial reserve	50,000	100,000

Other items formerly under quota have been placed on the unrestricted list as well as a few individual items, including outboard motors under 20 h.p. and footwear wholly of rubber.

Information respecting the import control position on individual commodities may be obtained from the International Trade Relations Branch, Department of Trade and Commerce.

Greece

CUSTOMS TARIFF AMENDMENTS—The amendments in the Greek customs tariff reported in *Foreign Trade* of November 26, 1955, page 26, have been published in the Greek Government Gazette as Decree-law No. 3451. Some revisions have been made in the course of the official publication of these amendments. The increased duties on rayon yarns and on artificial textile fibres expired on November 9 and the previous lower rates are again in force. On the other hand, the reduced duty on safety razor blades was abolished after October 21. Moreover, the turnover tax on certain imported business machines was reinstated to the higher rate of 7½ per cent of the duty-paid value—Athens, Dec. 14.

Pakistan

IMPORT CONTROL POLICY FOR JANUARY-JUNE 1956 ANNOUNCED—Cabled advice dated January 2 from the Canadian Commercial Secretary, Karachi, reports that the new import control policy of Pakistan for the shipping period January-June 1956 has been released.

According to the cablegram, there are no significant changes and no indication of the ceiling values. The following items are now included in the list of goods which may be imported from the dollar currency area: electrical cables and wires, radios, pressure lamps, refrigerators, condensed and preserved milk for industrial consumers, and several other items. A few deletions were made from the schedule of licensable goods.

Complete details will be announced when the official text is received by the International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

South Africa

REPRESENTATIONS RESPECTING THE TARIFF

—The South African Board of Trade and Industries announced on December 9, 1955, that it had received the following representations respecting the tariff:

Increase of duty on:

1. (a) Filter bags, cloths and discs made from:
 - (i) felt, other fibre wool or other fibre wadding, from various rates of duty to 10 per cent ad valorem; and
 - (ii) cotton wool or glazed or sized cotton, from various rates of duty to 15 per cent ad valorem.
 - (b) Washers, linings, conveyor belts and packing for various machines made from—
 - (i) felt or other fibre wadding, from various rates of duty to 10 per cent ad valorem; and
 - (ii) glazed or sized cotton, from various rates of duty to 15 per cent ad valorem.
 - (c) Packing and lagging for engines, machinery and piping, and packing for buildings from felt, from free of duty to 10 per cent ad valorem.
 - (d) Washers from felt, from free of duty to 10 per cent ad valorem.
2. Net curtain materials, by 20 per cent ad valorem.

Interested Canadian firms may wish to have their views on these tariff inquiries placed before the Board of Trade and Industries. The most effective method of doing so is to request their representatives in South Africa to act on their behalf before the Board. Since these matters are normally reviewed soon after the announcements are made, it is advisable to take action as soon as possible.

countries served by foreign trade service

This list shows the countries included in the territories of Canadian Trade Commissioner offices abroad and the post responsible for the promotion of Canadian trade in each.

Country	Post Responsible	Country	Post Responsible
Aden	Cairo	Gambia	London
Afghanistan	Karachi	Germany	Bonn
Alaska	Seattle	Gibraltar	Madrid
Algeria	Paris	Goa	Karachi
Angola	Leopoldville	Gold Coast	London
Argentina	Buenos Aires	Greece	Athens
Australia	Sydney and Melbourne	Greenland	Copenhagen
Austria	Berne	Guatemala	Guatemala
Azores	Lisbon	Guiana (British, Dutch, French)	Port-of-Spain
Bahamas	Kingston	Haiti	Port au Prince
Bahrein	Beirut	Hawaii	San Francisco
Balearic Islands	Madrid	Honduras	Guatemala
Barbados	Port-of-Spain	Hong Kong	Hong Kong
Belgian Congo	Leopoldville	Hungary	Berne
Belgium	Brussels	Iceland	Oslo
Bermuda	New York	India	New Delhi and Bombay
Bolivia	Lima	Indonesia	Djakarta
Brazil	Rio de Janeiro and São Paulo	Iran	Karachi
British Cameroons	London	Iraq	Beirut
British Guiana	Port-of-Spain	Ireland, Republic of	Dublin
British Honduras	Kingston	Ireland, Northern	Belfast
British Togoland	London	Israel	Athens
Brunei	Singapore	Italy	Rome
Burma	Singapore	Jamaica	Kingston
Cambodia	Hong Kong	Japan	Tokyo and Kobe
Canal Zone, Panama	Guatemala	Jordan	Beirut
Canary Islands	Madrid	Kenya	Salisbury
Cape Verde Islands	Lisbon	Korea	Tokyo
Cayman Islands	Kingston	Kuwait	Beirut
Ceylon	Colombo	Laos	Hong Kong
Chile	Santiago	Lebanon	Beirut
China	Hong Kong	Leeward Islands	Port-of-Spain
Colombia	Bogotá	Liberia	New York
Costa Rica	Guatemala	Libya	Rome
Cuba	Havana	Liechtenstein	Berne
Curaçao	Caracas	Luxembourg	Brussels
Cyprus	Cairo	Macao	Hong Kong
Czechoslovakia	Berne	Madagascar	Johannesburg
Denmark	Copenhagen	Madeira	Lisbon
Dominican Republic	Ciudad Trujillo	Malaya	Singapore
Dutch Guiana	Port-of-Spain	Malta	Rome
Ecuador	Bogotá	Mauritius	Johannesburg
Egypt	Cairo	Mexico	Mexico
England	London and Liverpool	Morocco, French	Paris
Ethiopia	Cairo	Morocco, Spanish	Madrid
Falkland Islands	Montevideo	Mozambique	Johannesburg
Federation of Rhodesia and Nyasaland	Salisbury	Netherlands	The Hague
Fiji	Wellington	Netherlands Antilles	Caracas
Finland	Stockholm	Netherlands Guiana	Port-of-Spain
Formosa	(See Taiwan)	New Guinea	Sydney
France	Paris	New Zealand	Wellington
French West Africa	Paris	Nicaragua	Guatemala
French Equatorial Africa	Leopoldville	Nigeria	London
French Guiana	Port-of-Spain	North Borneo	Singapore
French West Indies	Port-of-Spain	Northern Ireland	Belfast
		Norway	Oslo

Country	Post Responsible
Orange Free State	Johannesburg
Pakistan	Karachi
Panama	Guatemala
Paraguay	Montevideo
Persia	(See Iran)
Peru	Lima
Philippines	Manila
Portugal	Lisbon
Portuguese East Africa	Johannesburg
Portuguese Guinea	Lisbon
Puerto Rico	Ciudad Trujillo
Rio Muni	Madrid
Rio de Oro	Madrid
Ruanda Urundi	Leopoldville
El Salvador	Guatemala
St. Pierre and Miquelon	St. John's
Sarawak	Singapore
Saudi Arabia	Cairo
Scotland	London
Seychelles Islands	Salisbury
Siam	(See Thailand)
Sierra Leone	London
Singapore	Singapore
Somaliland	Cairo
South Africa, Union of	Johannesburg and Cape Town
South West Africa	Cape Town
Spain	Madrid
Sudan	Cairo
Surinam	(See Netherlands Guiana)
Sweden	Stockholm
Switzerland	Berne
Syria	Beirut
Taiwan	Hong Kong
Tanganyika	Salisbury
Tangier	Madrid
Thailand	Singapore
Tobago	Port-of-Spain
Trieste	Rome
Trinidad	Port-of-Spain
Tunisia	Paris
Turks and Caicos Islands	Kingston
Turkey	Athens
Uganda	Salisbury
United States	Boston, Chicago, Detroit, Los Angeles, New Orleans, New York, San Francisco, Seattle, Washington
United Kingdom	London and Liverpool
Uruguay	Montevideo
Venezuela	Caracas
Viet Nam	Hong Kong
Wales	Liverpool
Western Samoa	Wellington
Windward Islands	Port-of-Spain
Yemen	Cairo
Yugoslavia	Rome
Zanzibar	Salisbury

"Buy American" Act Redefined

IN ACCORDANCE WITH the President's directive of December 1954 on the application of the "Buy American" Act, the U.S. Department of the Interior has announced a new policy in evaluating foreign and domestic bids. This policy, it is expected, will be adopted by all U.S. government departments and agencies. It establishes definite price differentials that will be used under certain circumstances in comparing foreign and domestic bids; this will permit foreign firms to try to obtain business in this country with some degree of confidence.

Basic Price Differential

The President's directive established a basic price differential of six to ten per cent (depending upon whether customs duties and other costs were included in the foreign prices) which foreign bidders had to meet. The directive, however, listed broad exceptions and the federal agencies concerned were left to their own discretion in applying these. The exceptions covered bids in which one or more of the following four were involved: the national interest, the national security, the availability of supply from labour surplus areas (later defined as areas with more than 6 per cent of the labour force unemployed), and the grant of a fair share to "small business". The policy announced by the Department of the Interior concerns the labour surplus exception; the other three are not affected.

"Labour Surplus" Policy

The new "labour surplus" policy is applied in the following way. In cases where a foreign bid is offered in competition with a bidder offering equipment which he undertakes to have produced in a United States labour surplus area, as certified by the Department of Labour, the 6 per cent basic differential provided for in the President's directive is increased to 12 per cent.

To be successful, therefore, a domestic bid must be lower than the lowest foreign bid after the latter has been increased by 12 per cent. On the basis of this 12 per cent markup, the Department of the Interior awarded four contracts to foreign firms, despite the fact that one of the re-evaluated foreign bids—for \$106,005—was a mere \$232 less than the lowest domestic bid.

—E. H. MAGUIRE,
Commercial Secretary, Washington.

The following nominal quotations may prove useful in checking prices. Canadian traders should consult their banks before making any firm commitments.

Conversions into Canadian dollar equivalents and units of foreign currency per Canadian dollar have been made at cross rates with sterling or the United States dollar on the date shown.

Except when buying and selling rates are specified, the mid rates only are quoted. The buying rate is that at which banks purchase exchange from importers. The selling rate is that at which banks sell exchange to importers.

When several rates are indicated, the rate applicable depends on the commodity traded. Information on the rate for any specific commodity may be obtained from the International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

Rates used exclusively in non-merchandise trading are *not* included in the table.

For conversion to United States dollar equivalent multiply by 1.00125.

foreign exchange rates

Country	Unit	Type of Exchange	Can. dollar equivalent Jan. 6	Units per Canadian dollar	Notes (See below)
Argentina	Peso	Official	.05549	18.02	(3)
		Free	.02748	36.39	
Australia	Pound		2.2423	.446	
Austria	Schilling		.03841	26.03	
Belgium- Luxembourg	Franc		.02000	50.00	
Belgian Congo	Franc		.02000	50.00	
Bolivia	Boliviano	Official	.00526	190.04	
British West Indies	Dollar		.5839	1.71	(4)
	Pound		2.8028	.357	(5)
	Dollar	British Honduras	.7007	1.43	
Brazil	Cruzeiro	Effective selling			
		Category I	.01148*	87.13*	tax 10% (2)
		Category V	.00283*	353.76*	*Dec. 20
		Official buying	.05441	18.38	(6)
Burma	Kyat		.2097	4.76	
Ceylon	Rupee		.2102	4.76	
Chile	Peso	Official	.00496	201.8	(1)
		Principal	.00331	301.88	(7)
Colombia	Peso	Basic	.3995	2.50	(8)
		Free	.2502*	4.00	*Jan. 4
Costa Rica	Colon	Official	.1779	5.62	
		Controlled free	.1504	6.65	
Cuba	Peso		.9988	1.001	tax 2% (2)
Czechoslovakia	Koruna		.1387	7.21	
Denmark	Krone		.1446	6.92	
Dominican Republic	Peso		.9988	1.001	
Ecuador	Sucre	Official	.06659	15.02	
		Free	.05773	17.32	
Egypt	Pound		2.8680	.349	(7)
Fiji	Pound		2.5251	.396	
Finland	Markka		.00434	230.41	
France	Franc		.00285	349.65	(9)
French Africa	Franc		.00571	175.01	(10)
French Pacific	Franc		.01570	63.69	(11)
Germany	D Mark		.2370	4.22	
Greece	Drachma		.03329	30.04	
Guatemala	Quetzal		.9988	1.001	
Haiti	Gourde		.1998	5.01	
Honduras	Lempira		.4994	2.002	
Hong Kong	Dollar	Free	.1702	5.87	*Dec. 31
Iceland	Krona	Official	.06133	16.31	
		Special buying	.04834	20.69	(12)
		Special selling	.03805	26.28	
India	Rupee		.2102	4.76	
Indonesia	Rupiah	Basic	.08749	11.43	(13)
Iran	Rial	Certificate	.01318	75.84	
Iraq	Dinar		2.7965	.358	
Ireland	Pound		2.8028	.357	
Israel	Pound		.5549	1.80	
Italy	Lira		.00160	623.44	
Japan	Yen		.00278	360.10	
Lebanon	Pound	Free	.3073	3.25	

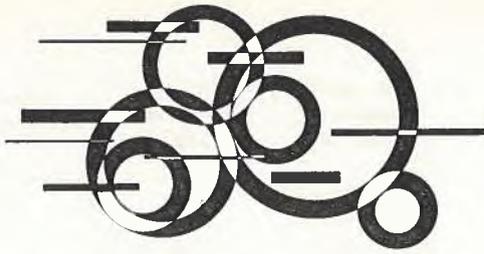
* Latest available quotation date.

Country	Unit	Type of Exchange	Can. dollar equivalent Jan. 6	Units per Canadian dollar	Notes (See below)
Mexico	Peso .....	.....	.07990	12.52	
Netherlands	Guilder .....	.....	.2610	3.83	
Netherlands Antilles	Guilder .....	.....	.5259	1.90	
New Zealand	Pound .....	.....	2.8028	.357	
Nicaragua	Cordoba	Effective buying .....	.1513	6.61	
		Official selling .....	.1417	7.06	
Norway	Krone .....	.....	.1398	7.15	
Pakistan	Rupee .....	.....	.2102	4.76	
Panama	Balboa .....	.....	.9988	1.001	
Paraguay	Guarani	Basic .....	.04756	21.03	(1)
		Group I .....	.03699	27.03	(14)
		Group II .....	.02854	35.04	
		Certificate .....	.05257	19.02	
Peru	Sol .....	.....	.4994	2.002	
Philippines	Peso .....	.....	.03486	28.69	(15)
Portugal	Escudo .....	.....	.3995	2.50	
El Salvador	Colon .....	.....		
Singapore & Malaya	Straits dollar .....	.....	.3270	3.06	
South Africa (Union of)	Pound .....	.....	2.8028	.357	
Spain & Dependencies ...	Peseta	Basic buying .....	.04561	21.93	
		Basic commercial selling .....	.06081	16.45	(1)
		Free .....	.02564	39.00	
Sweden	Krona .....	.....	.1931	5.18	
Switzerland	Franc .....	.....	.2331	4.29	
Syria	Pound	Free .....	.2825	3.54	*Dec. 13
Thailand	Baht	Free .....	.04816	20.76	(1)
Turkey	Lira .....	.....	.3567	2.80	
United Kingdom	Pound .....	.....	2.8028	.357	
United States	Dollar .....	.....	.99875	1.001	tax 6% (2)
Uruguay	Peso	Official .....	.6575	1.521	(1)
		Basic buying .....	.5611	1.782	
		Special buying .....	.4250	2.353	
		Basic selling .....	.4756	2.103	
		Special selling .....	.3567	2.804	
Venezuela	Bolívar .....	.....	.2981	3.35	
Yugoslavia	Dinar .....	.....	.00333	300.12	

* Latest available quotation date.

notes

1. Additional rates are in effect.
2. Tax affects selling (import) rates only; certain essential imports exempt.
3. Argentina: Additional rates result from exchange retentions on export proceeds and surcharges on imports.
4. Barbados, Trinidad, Tobago, Leeward and Windward Is., Br. Guiana.
5. Bahamas, Bermuda, Jamaica.
6. Brazil: Currency certificates auctioned for five import categories. Effective selling rate is official plus price of certificates. Exporters receive cruzeiros at official rates plus exchange premiums ranging from 18.70 to 31.70 cruzeiros per U.S. dollar depending on product.
7. Chile: Official rate applies only to most essential imports.
8. Colombia: Stamp taxes of 3, 10, 30, 80 and 100 per cent on imports depending on essentiality. The free rate applies to minor exports and less essential imports.
9. Includes Algeria, Tunisia, Morocco, Guiana, Guadeloupe, Martinique.
10. Equatorial Africa, West Africa, Cameroons, Togoland, Somaliland, Madagascar, Reunion, St. Pierre and Miquelon.
11. New Caledonia, New Hebrides, Oceania.
12. Iceland: Special rates apply to minor export products of small fishing boats and designated non-essential imports.
13. Indonesia: Basic rate applies to all exports and a few essential imports. Purchase of exchange for other imports is subject to surcharges of 50, 100, 200 or 400 per cent depending on products.
14. Paraguay: Paraguayan exports subject to basic rates plus variety of exchange subsidies and surcharges.
15. Portugal: Approximately same rate for Portuguese Territories in Africa.



transportation notes

Hong Kong

AIRMAIL SERVICE TO CHINA—An airmail service between Hong Kong and the major Chinese cities of Peking, Shanghai, Hankow, and Kunming has been started. Rates from Hong Kong will be 50 cents (local currency) per half ounce, and the service will be confined to first class correspondence. In practice, airmail correspondence moves from the Colony to Canton via rail, and then by air to its final destination. Correspondence to other Chinese destinations will continue to go by the usual surface routes—Hong Kong, Dec. 22.

Netherlands

DRYDOCK—The largest drydock in the Netherlands, capable of taking ships of up to 60,000 tons, was officially opened in Amsterdam on November 26th. The dock, which is 800 feet long and 130 feet wide, was built at a cost of 12 million guilders and is expected to serve particularly the largest types of tankers and ore carriers. The steel dock gate weighing 250 tons is reputed to be the largest in the world—The Hague, Jan. 6.

South Africa

AIR TRANSPORT—South African Airways will speed up service on the Johannesburg-United Kingdom run (in co-operation with BOAC) with three new Super-Constellations. The four Constellations now on this route will become surplus and are being suggested for use on the Israel run in conjunction with El-Al and on the Australia run in association with Qantas.

Domestic services are increasing. Natal Air Lines have begun an intraprovincial service connecting seven centres, and a second company is running scheduled flights between Durban, the Transkei and Zululand. Application for a helicopter service in Natal is being considered by the Division of Civil Air Transport. An independent company is operating between Johannesburg and the Orange Free State gold fields, and another is providing internal service in the Orange Free State—Johannesburg, Dec. 27.

AIRWAYS EXPAND—South African Airways celebrated its twenty-first birthday by opening two new national airports at Cape Town and Durban. An

international airport was opened at Johannesburg two years ago. During its first year of operation, 1934-35, SAA carried 8,938 passengers, but in 1954 the passenger list totalled over 200 thousand. The important contribution the airways make to the country's economy is illustrated by the increase in air freight from approximately one million ton-miles in 1949-50 to approximately double that figure today—Cape Town, Dec. 28.

South West Africa

TRANSCONTINENTAL RAIL LINK—The South West African Administration is being urged by organized agriculture, industry and commerce to build a railway (at a cost of some £20 million) to link the ports of South West Africa with the Rhodesia Railways at Matetsi near the Victoria Falls. The proposed line would cross southern Africa to the Indian Ocean ports of Beira and Lourenço Marques. Supporters of the proposal point out these advantages: (a) South West Africa could draw its coal supplies direct from the Wankie coalfield in Southern Rhodesia, (b) hardwood timbers in the Caprivi strip lying between Bechuanaland and Northern Rhodesia would be available to both South West Africa and the Federation of Rhodesia and Nyasaland, and (c) the Etosha Pan game reserve would attract substantial passenger revenues—Johannesburg, Dec. 27.

Sweden

DIESEL-DRIVEN MOTOR TANKER—A motor tanker was recently launched at Eriksberg shipyard in Gothenburg with dimensions which make it the largest ship yet built in Scandinavia and the world's largest diesel-driven tanker. Its cargo capacity is 34,500 tons deadweight—Stockholm, Jan. 3.

Viet Nam

POLISH SHIPPING SERVICE—A Polish shipping company inaugurated in October a regular steamer service between Gdynia and Haiphong in North Viet Nam. The first ship in the service, the steamer *Narwik* (7,065 tons), carried a cargo of Polish musical instruments, radio sets, gramophone records, books, textiles, footwear and cigarettes—Hong Kong, Dec. 21.