

Expects Russia Will Buy Canadian Wheat

OTTAWA (CP)—Trade Minister Howe said Friday he has every reason to believe Russia intends to buy 15,000,000 bushels of Canadian wheat this year under the Canada-Russia trade agreement.

Replying in the Commons to a question he said vessels already have been chartered to move the grain to Soviet ports.

However, Mr. Howe said the situation "differing" with respect to grain shipments to Iron Curtain countries, particularly Hungary, Poland and Czechoslovakia. He was hopeful that purchases would be made by these countries in the current crop year.

Under terms of the Canada-Russia trade pact, signed last February, Russia agreed to purchase a minimum of 14,800,000 bushels of wheat annually over a three-year period.

Gives Report On Color Television

OTTAWA (CP)—Canada's progress in the field of color television will be as fast as is necessary to meet demands for it, Revenue Minister McCann said Friday.

The minister, who reports to Parliament for the publicly-owned CBC, was replying to a Commons question by Gordon K. Fraser (PC—Peterborough). Mr. Fraser asked whether, in view of falling sales of black-and-white TV sets the CBC plans color programs on its TV net work and for private stations.

Dr. McCann said he didn't think black-and-white set sales had anything to do with it. The policy with respect to color TV was "progressing" and Canada was keeping up with developments in other countries.

Progress was perhaps not as fast as in other countries, but sufficient to meet Canadian demands.

Name Cherry Pie Baking Champion

TORONTO (CP)—Bette Tillman, 23-year-old home economics student from Churchill, Ont., has been named Canada's cherry-pie baking champion.

The second-year student at Macdonald Institute, Guelph, won the Ontario championship Jan. 10 and went on to her national title Friday by defeating Quebec champion Odette Boule, 20, of the University of Montreal.

She will represent Canada in the international finals at Chicago Feb. 21. The contest is open only to home economics students.

Here are the ingredients for Miss Tillman's almond-flavored cherry pie:

Crust: 2 cups cake flour, 2-3 cup all-purpose flour, 1 cup lard, 1 teaspoon salt and 7 to 8 tablespoons water.

Filling: 2½ cups drained thawed frozen cherries (approximately two 15-ounce cans), 3 tablespoons cornstarch, ½ cup sugar, ½ teaspoon salt, 1 tablespoon butter, ½ teaspoon almond extract and a few drops of red coloring.

Report On Sunday School Absentees

LONDON (CP) — Many British children who stop going to Sunday school do so because they are bored, a report shows.

Among 1,000 children replying to the question why they had stopped, 150 replied that they had lost interest—"I just got fed up with going" or "I got tired of it after all those years."

The report, prepared by a research committee set up by the Free Church Federal Council youth department in co-operation with other organizations, shows that most scholars leave Sunday school between the ages of 11 and 13, and are lost to the church.

One-third of Sunday schools questioned said difficulty was experienced through apathy among parents.

OPERATIONAL RESEARCH

DRB scientists joined their Commonwealth associates early last year at meetings of the Commonwealth Advisory Committee on Defence Science to discuss collaboration throughout the British Commonwealth in the application of science to military affairs. The discussions took place in Ottawa, Toronto and Fort Churchill early in February.

About 50 Canadian operational research scientists, the majority DRB staff members, joined several hundred associates from Canada and the US at the first Canadian meeting of the Operations Research Society of America in Ottawa early last January. Their discussions centred on developments in the field of operational research, a scientific specialty created relatively recently which embraces combinations of a number of scientific fields.

At the Board's annual symposium, held each December in Ottawa, about 600 scientists and Service officers from Canada, the United Kingdom and the United States heard approximately 40 scientific papers presented by members of the DRB staff. Emphasis was on the atomic sciences with related papers dealing with a variety of other Canadian defence research activities.

The Board's annual symposium provide staff members and Canadian service officers with detailed information on DRB activities. They promote exchanges of scientific information with the other two countries concerned and provide opportunities for Board scientists engaged in classified research to present and discuss their investigations.

OUR EARTH

Defence Research Board staff members were busy planning their contributions to Canada's 1957-58 Year (IGY) activities. CARDE scientists were integrated with a US Army rocket firing team at Fort Churchill that carried out a number of pre-IGY test firings at the northern Manitoba rocket site. Objectives will be the collection of data concerning the upper atmosphere.

Brought to an Ottawa railway siding from Chalk River and enclosed within 300 pounds of lead, the source was suspended inside CNR and CPR coaches by civil defence representatives. After the radio-active cobalt was exposed, scientists determined the geiger counter readings. Objective of the test was to determine the safety of evacuation through radioactive areas.

EMERGENCY TRAVEL

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PLANE PHONES

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MOCK WAVES

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MOTION SICKNESS

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The process is simple and convenient and probably most important of all during a possible national emergency, consumes little electric power. Dr. Boivin's contributions to the field of chemistry include the development of alternate methods to those now employed in synthesizing guanidine compounds and other allied investigations.

ATOMIC TRIALS

Other outstanding events during the same period were the Board's active participation in British-Australian atomic trials early last autumn. Mr. Zimmerman witnessed the first of four "shots" which were fired from a high, steel tower. The visit was particularly timely as a group of Board scientists, headed by Dr. J.A. Carruthers, of the Defence Research Chemical Laboratories at Ottawa, participated actively in the trials carrying out a wide range of scientific measurements and testing items of Canadian Services' equipment.

GUIDED MISSILE

The Hon. Ralph Campney, Minister of National Defence, announced last June modification of the Board's program involving the development of an air-to-air guided missile for the RCAF. Although the Velvet Glove, the weapon under development, was on schedule and up to the time of the announcement had fully attained its original specifications, the appearance of bombers with much increased performance made it appear desirable to change the production program in favour of a more advanced missile of US design.

Six years ago, little or no knowledge of this new weapons field existed in Canada. The Velvet Glove program had succeeded in training several hundred scientists and engineers. Service technical officers and industrial specialists in the techniques of missile design and development, production and testing. It created permanent research and development facilities worth approximately \$7,000,000 to serve many of the requirements of advanced weapons' research for many years. Finally, the necessary tools and specialized equipment acquired now provide Canada with the basic elements of a guided missile industry.

Several of the Board's establishments announced interesting accomplishments during the past 12-month period.

PLATING PROCESS

The Naval Research Establishment (NRE), of Dartmouth, N.S., provided details in October of a radically new method of electroplating copper on aluminum. The technique, which promises to permit a wider use of aluminum in the electrical field, stemmed from Board's Atlantic coast establishment. Copper plated aluminum wires can be soldered readily and assume copper's other favourable properties.

The scientists consider that employment of their technique will range from a wider use of aluminum in the home appliance field to copper-plated aluminum wiring in aircraft, ships, automobiles and buildings.



KING SAUD GREETED

NEW YORK — King Saud of Saudi Arabia, center is greeted by U.S. Ambassador to the United Nations Henry Cabot Lodge Jr. left, as Saud arrived here today enroute to Washington for talks with President Eisenhower on the Middle East. The two men at night are part of Saud's party of 71 persons.

AP Wirephoto

GEOPHYSICAL YEAR

Defence Research Board Is Ready For Important Work

Acceptance of the Chairmanship of the Defence Research Board by A. Hartley Zimmerman, a native of Hamilton and a mining engineer and geologist with an unusual background in industrial, scientific and defence problems, highlighted an eventful 1956 for Canada's defence research organization.

Mr. Zimmerman succeeded Dr. Ormond M. Solandt, the Board's first chairman who retired to assume the position of Assistant Vice President, Research and Development of the Canadian National Railways. When he accepted the reins of office as Canada's foremost defence scientist, Mr. Zimmerman came to DRB well prepared. He had served as Vice-Chairman for about a year and during the previous four years had been a Member of the Defence Research Board.

Shortly after taking over his new duties last March 1, he arranged for an airborne tour of the Canadian Arctic which included brief visits to and flights over Canada's northernmost islands, tours of DEW and Mid-Canada early warning line sites and visits to RCAF Station, Cold Lake, Alta., and Fort Churchill, Man.

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Dr. William James Archibald, Dean of Arts and Science at Dalhousie University, Halifax, and Herbert H. Lank, President of the duPont Company of Canada Limited, Montreal, accepted nominations as Members of the Defence Research Board for the normal three-year terms. Dr. Archibald and Mr. Lank succeeded Dr. H.D. Smith, President of the Nova Scotia Research Foundation, and Colonel R.D. Harkness, President of the Northern Electric Company Limited who completed their terms as appointed members.

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JANET

The Radio Physics Laboratory (RPL), one of two research units comprising the Defence Research Communications Establishment (DRTE) at Ottawa, released in July some details of a promising new communications technique which employs meteor trails to transmit radio messages over long distances. Called JANET, the development originated with an RPL team led by Dr. Peter A. Forsyth, formerly of Saskatoon.

The radio signals are reflected to a far-distant receiver from the ionized trails of the numerous tiny meteors which occur approximately 60 miles above the earth's surface. Because each meteor, some the size of a pinhead, can be used for about a second, transmission takes place in short bursts at very high speeds. Incoming information is stored and printed at normal speeds during the intervals between transmission bursts. Experiments have proved that signals can be transmitted clearly and safely for distances of up to 1,000 miles despite the atmospheric phenomena that frequently affect normal telecommunications methods adversely.

ATMOSPHERICS

Late in October, the same laboratory described an intriguing research program involving "whistlers" and the "dawn chorus", puzzling outer atmospheric phenomena. Studies of the former have led to important discoveries about an earth's upper atmosphere in the past.

Dr. L.R.O. Storey, of RPL, who is directing the program, initiated investigations of "whistlers" while attending Cambridge University. He found they are caused by lightning flashes which emit low frequency waves. The electrical waves are amplified into sound waves audible to humans which can provide science with valuable data above the upper atmosphere. These studies are particularly important in the field of communications research.

The "dawn chorus", which sounds like the twittering of thousands of small birds, has yet to be explained. Dr. Storey suggests investigations of this phenomena may yield useful information supplementary to and paralleling that obtained from "whistlers".

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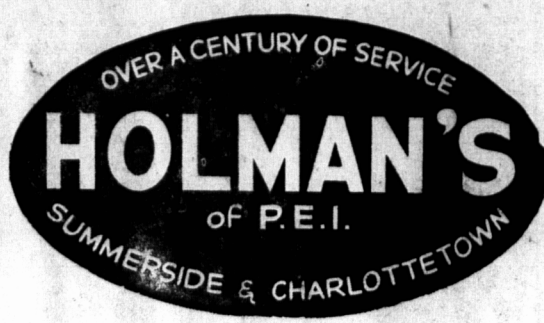
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