



Bulletin

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FAMILY ALLOWANCE PROPOSALS

The Canadian Council on Social Development has produced a set of proposals for a new family allowances program that it considers an improvement over the Family Income Security Plan (FISP) announced last November in the federal White Paper entitled *Income Security for Canadians*. The Council, in its initial comment on the White Paper on December 1, and in response to the Government's invitation for comment from citizens' groups, said it would examine the family allowance proposals as part of its general review of social security policies in Canada. The Government had announced that a revised family allowances plan was scheduled to go into effect in September 1971.

The Council's policy statement was worked out by a committee under the chairmanship of J. Harvey Perry of Toronto, executive director of the Canadian Bankers Association. The Council will be presenting its proposals formally to Mr. John Munro, Minister of National Health and Welfare.

The Council is in agreement with the White Paper that one aim of family allowances is to give financial recognition to the fact that people who have

children have additional claims on their income. Also endorsed by the Council is the other major aim of the White Paper — "a greater measure of opportunity for all children", and, because wage-rates cannot take account of the number of children a worker has, special emphasis on the needs of low-income families.

The Council's disagreement, however, with the FISP proposal concerns the method of achievement through grading the allowances by income levels. "This points the finger at low-income people, introduces stigma, damages community solidarity," argues Reuben C. Baetz, executive director of the Council.

INDIRECT GRADING METHOD

The Council's proposal for the payment of family allowances is to grade them *indirectly* to income by applying to them a special tax-schedule, through income-tax machinery, based on family income. FISP grades the allowances *directly* to income (\$16 a month a child to families earning \$4,500 and less; \$15 for incomes at \$4,501; no payment at all at \$10,001). The Council's proposal would leave more money with those who need it most and would also recapture more revenue than through FISP.

In addition to taxation of the family allowance benefits, the Council would remove present income-tax exemptions for dependent children under 18, as the Carter Commission on Taxation recommended. These exemptions involve a fundamental inequity since their value increases with the income of the taxpayer (Quebec has already eliminated this exemption for its share of income tax). Low-income families would be better assisted by net increased payments, the Council says.

The Council would also give consideration in its revised family-allowance program to the age of children, size of families (the level of income at which the family ceases to benefit from the allowance could be raised by a fixed amount for each additional

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child), and to escalation of benefits to allow for rises in the consumer price index.

EFFECT ON ONE-CHILD FAMILY

An example of a plan that would embody all the Council's recommendations for a family with one child would work as follows:

Everyone would be paid an average flat-rate allowance of \$25 a month, depending on the age-group of the child (three groups are suggested). The Council proposes \$25 a month as a realistic proportion of the actual cost of child-rearing and as compensation for the loss of the exemption in the lower income group. Thus, a family with an income of \$2,000 a year would receive \$300 a year in allowances for each child; under FISP it would receive \$192; and, under the present plan, \$84. A family earning \$5,000 a year would have its allowance taxed under the special tax-schedule and, with the loss of the exemption, it would receive \$299 a year; at \$10,000 income, a family would receive \$85 a year, and at \$12,000, \$12. The 100 percent recovery of the allowance by the Government would occur between \$12,000 and \$13,000 income, rather than at \$10,000, as in FISP. Thereafter, there would be an increasing annual net loss for each child compared to FISP, reaching \$155 at \$30,000 income. The cut-off point at which the allowance ceased to benefit the family would be raised when there was more than one child - for example, by \$1,000 a child.

COSTS

In the Council's \$25-a-month scheme, the gross annual cost to the country would be \$2 billion. An amount of \$706 million would be recovered in tax on the allowances, plus \$450 million from removal of the tax exemption for children under 18 - a much larger total amount than under FISP - for a net cost that is \$386 million more than FISP. The net cost of the present family-allowances program is \$560 million and that of the FISP program is \$534 million.

RECOMMENDATIONS

To sum up - for a reformed family allowances program the Council recommends:

- (a) A level of net benefits that, pending the introduction of a comprehensive income-security program, would give as much assistance as possible to lower-income families while making a reasonable contribution to the child-rearing costs of other families.
- (b) Universal flat-rate benefits ("demogrants") on behalf of dependent children under 18, which take account of the age of children, e.g., age-groups 0-5, 6-11 and 12-17, the last to include youth allowances, which should be integrated with family allowances.
- (c) Taxation of benefits on a special tax-schedule that would provide most help to lower-income groups and permit 100 percent retrieval of the allowances at some given point.

- (d) Elimination of the tax exemption for dependent children under 18. Removal of the exemption might be "staggered" over a period of years.
- (e) Variation in the special tax-schedule to give help in relation to the number of children in families with the same income.
- (f) A built-in escalation clause to take full account of any annual rises in the consumer price index.

MOTOR-VEHICLE SALES

In March, 83,080 new motor vehicles were sold in Canada. This was 15.9 percent more than a year earlier, but fewer than the 86,696 sold in March 1969. The retail value, \$316.4 million, was 19.6 percent higher than last year, and almost equal to the corresponding value in 1969.

Passenger-car sales (69,354 units) were up 18.2 per cent from March 1970, and commercial-vehicle sales rose a modest 5.3 per cent. Sales of North American cars increased 16.9 per cent, to 55,454 units (80.0 per cent of the market), while those of overseas cars rose 23.8 per cent, to 13,900. The only declines reported were in sales of commercial vehicles in Alberta and of imports from overseas in Quebec.

In the first quarter, total vehicle sales rose to 179,574 units (4.2 percent more than a year earlier) valued at \$675.1 million (up 6.0 per cent). Cars made in North America accounted for 80.6 per cent of the Canadian passenger-car market, against 83.1 per cent in the first quarter of 1970.

ACADEMICS MEET DIPLOMATS

Representatives of some 26 universities and institutions dealing with international affairs met in Ottawa on May 13 and 14 with officers of the Department of External Affairs. Subjects discussed included the recently-published policy statement *Foreign Policy for Canadians*, EEC enlargement, Canada-United States relations and the exchange of diplomats with the People's Republic of China.

Considerable attention was given to the search for more effective means of consultation between the academic community and External Affairs. These contacts have been increasing during the last few years. Officers of the Department of External Affairs are now assigned as foreign service visitors to universities. It is intended that academics shall spend similar periods working with the Department. The session chairmen included Mr. A. Davidson Dunton, President of Carleton University, Mr. Gilles Lalonde of the Department of Political Science, University of Montreal, and Mr. Paul Tremblay, Associate Under-Secretary of State for External Affairs.

BUILDING MATERIALS FROM WATER WASTE



Spent sulphite liquid (left) and common clay (with foaming agents) produced the foamclay brick shown at right.

Pulp-and-paper industrial processes pose a major unsolved problem to "environmentalists" seeking ways to reduce the pollution of Canadian waterways.

Each day that a typical 200-ton sulphite pulp mill operates, it produces, as an unwanted by-product, 400,000 gallons of waste liquor, a crude calcium lignosulphonate, which contains about 200

tons of solids. Only a fraction of these wastes is converted into useful by-products, the rest being dumped into the nearest body of water. Each year, liquid containing about 3 million tons of solids is discharged from pulp-and-paper plants in Canada. The liquid is a particularly bad pollutant, since it greatly depletes dissolved oxygen in rivers or lakes.

During a study of the acoustic properties of liquid foams, Gavin Macaulay, an engineer of the National Research Council of Canada, discovered that a remarkably stable foam could be made by whipping common clay with spent sulphite liquor. Air drying and firing of the mixture resulted in a permanent low-density ceramic foam product or "foamclay". Foamclays have been made before, but not with low-grade clays and so cheap a foaming agent.

Canada has large deposits of low-grade clays, which, though varied in composition, are typified by a rather low fusion point, short firing-range and high shrinkage. Because of these qualities, most of these deposits are of little commercial value.

Mr. Macaulay examined the possibility that, by suitably treating a mixture of common clay with spent sulphite liquor, useful and commercially attractive building materials might be produced. Ideally, these would be in the form of large, lightweight building blocks or panels with structural strength and thermal insulation provided by the porous body.

A long series of exploratory experiments has been made in an attempt to improve the casting and drying properties of the wet foamed clay so that large blocks can be made. Two further ingredients were found which, when added in small percentages to mixtures of clay, water and spent sulphite liquor, greatly improved the setting or thixotropic properties



Gavin Macaulay pours a mixture of clay and spent sulphite liquor into a metal mould - one of the final steps in producing foamclay bricks.

and reduced shrinkage cracking during green drying. With these five ingredients, the number of possible mixtures becomes very large.

BASIC RECIPE

A fairly successful basic formula was found. Most of the experiments, at this stage, were limited to fairly small variations.

In these experiments, after the clay is well dispersed in the water and spent sulphite liquor, the foam-stabilizing additives are incorporated and the whole whipped in a mixer for ten minutes. At this stage, the foam is about the consistency of thick whipped cream, and can be readily cast, but after a few minutes without agitation, it develops a pronounced thixotropic set.

After final whipping, the stiff foam is cast in sheet-metal forms. The forms are lifted off after five minutes and the blocks are dried overnight at 140 degrees at high humidity, to minimize shrinkage cracking. Finally, the blocks are fired to 1,800 degrees Fahrenheit in a muffle and allowed to cool.

Mr. Macaulay has had little success producing large-sized foam-clay blocks (concrete block-size or larger), but he has had considerable success in producing a lightweight aggregate that can be used to mix with cement plaster or plastic to produce an

interior finishing tile or panels of any desired dimensions.

VARIOUS POSSIBILITIES

He has been able to make a whole spectrum of materials, from a fragile ceramic lattice weighing only 15 pounds a cubic foot to materials approaching the properties of common brick. The strength of these materials is about 1,000 pounds a square inch for a density of 50 pounds a cubic foot.

One example is a terrazzo-like tile made from mixing foamclay pellets with cement and finishing with plaster. The lightweight panel appears to be suitable for use as basement finish or the interior of public buildings. Although the cost of producing these materials has not been assessed, the cost of the ingredients is almost nil.

Making these building materials from spent sulphite liquor wouldn't eliminate the sulphite pollution problems of pulp-and-paper companies in Canada, Mr. Macaulay says. He estimates that all building materials used in Canada would have to be made from this foamclay before this could happen — an unlikely event. He believes, however, that the process could make a significant contribution to utilizing some of industry's pollutant wastes.

ANNUAL NATO FLYING TESTS

Aircrews and support forces from six nations of the Atlantic alliance, including Canada, will test their abilities when Allied Forces Central Europe (AFCENT) conducts its annual reconnaissance competition at Ramstein air-base, Germany, from June 1 to 12.

Called "Royal Flush XVI", the flying competition will feature top aircrews from nations of the Control Region — Belgium, Canada, the Netherlands and the United States — and two guest teams, one from France and one from Norway.

The AFCENT competitors will be drawn from Second Allied Tactical Air Force (TWOATAF), with headquarters at Moenchengladbach, Germany, and Fourth Allied Tactical Air Force (FOURATAF), with headquarters at Ramstein.

Two teams will be entered from TWOATAF and four from FOURATAF. The daylight missions are designed to test the ability of the AFCENT units to carry out briefed reconnaissance requirements to provide timely and accurate information about simulated targets.

Competition planners also feel that "Royal Flush XVI" will help to demonstrate to the public and to military users of reconnaissance information the reconnaissance methods used to support air and ground forces. Aircraft employed during the competition will include the RF84F, the R-104, the

CF-104, the RF-4C, the French *Mirage III* and the Norwegian F5.

The aircrews will be competing for a variety of trophies signifying their proficiency in both flying and support duties. Top prize is the Gruenther trophy, named after General Alfred M. Gruenther, a former Supreme Allied Commander Europe, which will be awarded to the top ATAF team. The key to victory in the "Royal Flush XVI" program will be the integral relation between highly efficient aircrews and groundcrews for the respective units.

Army units throughout Western Europe will also compete for a trophy signifying the best target display presented during the competition. After a limited briefing, crews must seek out and photograph selected targets throughout Western Europe. The results of each mission will then be evaluated by an international panel of judges and photographic interpreters. The goal of each mission is a maximum of information with a minimum of error.

CANADA-U.S. GEODETIC GRID

Canadian surveyors and map-makers will soon be able to rely on the most precise positioning data that space-age technology can provide, thanks to a joint Canada-United States satellite triangulation survey. The survey entered its final stage in March with the movement of observing stations to Frobisher

Bay on Baffin Island and to St. John's, Newfoundland. It will result in the most accurate geodetic grid ever achieved in Canada, and will serve as a basis for correcting and densifying the existing framework.

A FIRST BY SATELLITE

A geodetic grid is the starting-point for all other types of survey — topographic, hydrographic, municipal, legal and engineering. Although Canadian surveyors have been using sophisticated airborne survey instrumentation for a number of years, this is the first full-scale geodetic survey employing a satellite.

The survey, which started in 1964, is based on photographs of balloon-type satellites, originally ECHO 2, and now PAGEOS, against the star background. With a precise knowledge of star and satellite positions, and with timing controlled to within one one hundred-thousandth of a second, the relative positions of camera stations can be determined with a margin of error of about 1 foot in 200 miles. Conventional geodetic surveys have a margin of error of 1 foot in 10 to 40 miles.

In Canada, observations have just been completed at Whitehorse in the Yukon and Cambridge Bay, Northwest Territories, which connect the Canadian grid to similar stations in Alaska and the Aleutian Islands. Observing operations will be started at St. John's immediately; at Frobisher Bay the equipment will be stored until operations are resumed there in late September. By the end of March 1972, field operations in Canada will be completed, but, because of the wealth of data obtained and the complex processing required, the final positions of stations will not be determined until 1975. Following this, it will be possible to undertake a complete readjustment of the North American precise horizontal-control network.

The Canada-U.S. project is being carried out by the Surveys and Mapping Branch of the Department of Energy, Mines and Resources, the Mapping and Charting Establishment of the Department of National Defence and the U.S. National Ocean Survey. The Canadian project is part of the North American Densification Program that fits into the recently completed World-wide Geodetic Satellite Program. The World-wide Program ties points on all the continents into a single, unified geodetic grid for the first time in history.

OLD SEA FIGHT RECALLED

The Baie des Chaleurs on the Gaspé coast will give up more of its treasures this summer as underwater archaeological work continues on the French naval vessel *Machault*, scuttled in 1760 during the final sea engagement between France and England in the New World. Excavation of the 145-foot hull began in 1969 under the supervision of Walter Zacharchuk,

in charge of underwater archaeology for the National Historic Sites Service of the Department of Indian Affairs and Northern Development.

The *Machault* was one of three military supply vessels sent in 1760 to relieve the French forces defending Montreal after the British capture of Quebec in 1759. Unable to reach Montreal because of the British blockade, the convoy took refuge in the Baie des Chaleurs, near the mouth of the Restigouche River. There they were discovered by the British fleet. In the ensuing battle on July 9, one French vessel, the *Marquis de Malauze*, was captured and burned. The other two ships, the *Machault* and the *Bienfaisant*, were scuttled by the French forces, who then retreated inland.

OBJECTS RECOVERED

In their first two seasons, Mr. Zacharchuk and his team of divers excavated about a third of the hull of the *Machault* and recovered thousands of objects from it. Among these were quantities of Chinese porcelain and unused boots, cutlery, coins, wood-working tools, cannon balls and a 3,000-pound cannon.

RADIO EQUIPMENT FOR IRAN

A \$23-million export order has been received by Canadian Marconi of Montreal from the Imperial Iranian Government. The Telecommunications Division of Canadian Marconi will supply Iran with Canadian radio-relay communications equipment sufficient to provide about 1,000 man-years of work, according to Mr. L.M. Daley, the President of Canadian Marconi.

The contract will be financed by the Export Development Corporation as part of a \$100-million line-of-credit agreement signed by the Imperial Government of Iran and the EDC last February.

"I am pleased with the initiative taken by Canadian Marconi in negotiating this contract," said Mr. Jean-Luc Pepin, Minister of Industry, Trade and Commerce, in announcing the order. "This is the type of effort needed in exporting. I am gratified by the increasing interest shown by Iran in Canada's capacity to make useful contributions to its requirements, and am confident that this transaction will bring important benefits to both countries."

HISTORIC SHIP TO BE RESTORED

The sails of the *St. Roch*, the first ship to navigate the Northwest Passage in both directions and to circumnavigate North America, will soon be unfurled again. The three-year, \$316,000 restoration program for the former Royal Canadian Mounted Police schooner will be carried out by the National and Historic Parks Branch and the Technical Services Branch of the Department of Indian Affairs and Northern Development.

MEMBER OF FAMED TRIO

The *St. Roch* is one of three historic Arctic ships restored in this manner. The others are Amundsen's *Gjoa*, the first ship to sail through the Northwest Passage, now on display in San Francisco, and Nansen's *Fram*, on display in Oslo.

Built in Vancouver's Burrard Shipyards and launched in 1928, the *St. Roch* has been owned and maintained by the City of Vancouver since she was retired from service in 1954. She remains on permanent exhibit in a sheltered annex of the city's Maritime Museum.

RESTORATION PLANS

The *St. Roch* is to be returned to the condition in which she was in 1955 after completion of her two-year voyage through the Northwest Passage from Pacific to Atlantic. To recreate the ship's interior as it was at that time will require considerable research. The restored vessel will be given a "lived-in" look, with furniture, clothes and equipment to reflect the personalities of her crew. The restoration is expected to be completed by the spring of 1974.

In 1944 the *St. Roch* completed her second historic voyage by navigating the Passage from east to west in a single season. In 1950 she set her third record by sailing from Halifax to Vancouver through the Panama Canal, the first vessel to circumnavigate the North American continent.

UNIQUE GRAINS INSTITUTE

The establishment in Winnipeg, Manitoba, of an internationally-oriented Canadian Grains Institute offering practical courses on every aspect of the grain industry to foreign and Canadian participants was jointly announced on May 13 by Mr. Otto Lang, the Minister responsible for the Canadian Wheat Board, and Mr. H.A. Olson, the Minister of Agriculture.

"The prime reason for the establishment of the Institute," the Ministers stated, "is the promotion of Canadian grains and oilseeds in our overseas and domestic markets. It is vitally important that we maintain and use constructively the international fund of goodwill which has been developed through the years toward the Canadian grain industry."

HOUSING AND EQUIPMENT

The Canadian Grains Institute will operate under the joint direction of the Canadian Wheat Board and the Canadian Grain Commission. It will be housed in the new Canadian Grain Commission Building, which is scheduled for completion by the autumn of 1972. In addition to classroom facilities and teaching laboratories equipped with the latest teaching techniques and multilingual instruction systems, there will be modern facilities for demonstrating commercial milling and baking processes, oilseed-extraction methods and feed-processing techniques.

Personnel of the grain industry in Canada and abroad will be offered comprehensive courses on production, handling, transportation, and marketing, emphasizing the management, economics and technology of grains and oilseeds. Participants from overseas will be representative of countries that already import Canadian grains and oilseeds or that may become customers. Short intensive courses will be available for senior executives.

ASSET WITHOUT PARALLEL

The Canadian Grains Institute will be an unparalleled asset for Canada; no such facility is provided elsewhere in the world. Foreign participants will gain a better appreciation of Canadian grains and institutions, and Canadians will gain a better understanding of the needs of foreign customers. The Institute will also provide an opportunity to the Canadian and foreign grain industries to train their junior and senior executives in all aspects of the industry, or bring them up to date. Short intensive courses will be available for senior executives. The Institute will serve about 60 participants at a time.

The cost of the CGI will be covered by a special fund set up by the Federal Government to support market-development projects for grains and oilseeds. Operating costs will be shared by the Canadian Wheat Board and the Government. The general policies of the Institute will be determined by a Board of Directors made up of representatives of the Canadian Wheat Board, the Canadian Grain Commission and the Federal Government.

A small permanent administrative and teaching staff will be attached to the Institute. Extensive use will be made of expert staff drawn from senior levels of Canadian grain institutions, the grain trade, universities and government.

Mr. Lang and Mr. Olson stated that this program was a further step in the intensified activity for developing markets for Canadian grains and oilseeds.

PRIZE-WINNING VIOLINIST IN N.Y.

Miss Adele Armin, 24, of Toronto, who won the prize in the First Annual Cosmopolitan Violin Competition, defeating contestants from Japan, Korea, Israel, Portugal and the United States, received the \$1,000 award at a gala benefit concert on May 18 at the Philharmonic Hall, Lincoln Center, New York.

Miss Armin played the Prokofiev *Violin Concerto No. 2*, accompanied by the Cosmopolitan Young Peoples Symphony Orchestra under the direction of Christopher Keene, conductor of the New York City Opera. A many-time scholarship and award winner, Miss Armin was chosen last year as "Laureate des auditions des matinées symphoniques" in Montreal and was awarded a Canada Council grant to allow her to continue her studies. She is also a CBC Talent Festival winner and has performed with several of Canada's leading orchestras.