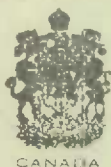


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A FACT A DAY ABOUT CANADA

FROM THE

DOMINION BUREAU OF STATISTICS

NINTH SERIES

1942 - 1943

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James Muir,

Editor.

No. 125. -- Improving Textiles.

Textiles are fabrics produced by the weaving or knitting of yarns into cloth. This is probably one of the oldest known industries; older than man in fact, since it was practiced by spiders, caterpillars and birds before the advent of the human race. It is known to have existed in the Stone Age. It is believed that the first textile article produced by prehistoric man was a mat or fishnet woven of rushes. This was followed by the basket.

At the dawn of history, wool, cotton, silk and flax were being woven in the East with great skill. The Egyptians, the Chinese and East Indians had reached an advanced state of development in the making of textiles 3000 years before the Christian Era. In North and South America, the Mexicans, Peruvians, Incas and Mayas of antiquity produced textiles of beauty and fineness.

Down through the centuries man's inventive genius has steadily improved upon the methods of manufacture. Today, hundreds of gigantic textile mills are turning out millions of yards of cloth that will provide the clothing to protect our fighting men from the elements, whether flying miles high in the stratosphere, fighting on desert sands, in the cold of wintry blasts or with our fighting ships on the high seas.

In fact the demands of modern scientific warfare have created the need for special textiles that were not even thought of before the outbreak. The textile industry has taken up the challenge and is meeting the demand. Although it would be quite impossible to go into detail on the products made by this great Canadian industry it is perhaps sufficient to say that it is today adequately meeting the demands on two fronts - the battle front and the home front.

Reflecting the continued expansion in Canada's war effort, impressive increases were recorded in all branches of Canadian textile manufacturing in 1941, with the result that the gross value of products turned out by Canadian mills was more than \$666,000,000, an increase of 22 per cent over 1940.

No. 126. -- Historical Sites.

Thumbing through the pages of an old Canadian history text, there is no more attractive story than the saga of Queenston Heights. There in cold type is the story of how a few gallant men under the audacious leadership of Sir Isaac Brock held the Niagara frontier one October day back in 1812. Shouting "Follow me boys!" Brock ordered his sorely outnumbered men to charge and fearlessly led the way up the difficult slope straight for the enemy. That was his last order. Fifty yards from the gun he sought to capture, he went down with a bullet in his heart. But the Heights were not lost that day.

Not long ago the writer visited the scene of that struggle. High on a hill commanding a view of the entire Niagara Valley stands the monument erected in memory of Sir Isaac Brock. History walked with us as we made our way over the old battleground to the foot of the huge fluted tower that marks his burial place. On the very pinnacle stands a giant stone image of the Major General himself, keeping constant vigil over the very heights he fought to preserve. Inside there is a narrow stone staircase winding up and around and up and up till the wind moans in your ears and you feel the ghosts of old warriors pressing close.

At the top you can look out through narrow apertures at the Niagara river tumbling below, the quiet wooded countryside and the modern paved highway slashing boldly over the ancient hill where 130 years ago Sir Isaac and a handful of troops died while making history. Across the river lies the United States of America.

As the old general looks down on the scene he must marvel at the changes wrought by time and chuckle as he watches the smoke from Canadian and American industry geared for war rise together, a symbol of unity in a common cause.

No. 127. -- Demand for Native Fruits

The 1943 season for Canadian-grown fruits promises more consumer problems than producer problems. The consumer demand for home-grown fruits, fresh or processed, has improved with increased purchasing power, with reduced supplies of imported fruits, notably bananas, with virtual disappearance of such items as Malayan canned peaches and apricots, and with sharp reduction in available supplies of dried prunes, raisins, dates and figs.

Already it is known, that this year we will have some crop shortages, especially of peaches and strawberries in Ontario and of apricots and strawberries in British Columbia. And as each of these is consumed fresh and is canned both commercially and in the homes, users of these fruits may well plan ahead to reduce their uses of them and to increase their uses of other fruits. As yet we have no definite indication of the size of the apple crop, but having had three sub-average years in a row we may well expect a somewhat more abundant crop in 1943.

There is good news for fruit growers as well as for the consuming public in the recent announcement by the Sugar Administration of a new coupon method for obtaining extra sugar for home canning. This promises to solve the growers' problem with any surplus of popular fruits. And already there is abundant evidence that the housewives intend to indulge in the one kind of hoarding that can bring no criticism--dozens and dozens of jars of the home-canned fruits and jams they have found far from abundant this winter.

Housewives may well share the worry of the growers and the operators of canning and jam factories that there may be a shortage of labour for these plants through the August-September peak. On sufficient labour from all possible sources for that peak period, supplemented by home canning, rests the difference between sufficiency and shortage of these fruits beyond their relatively short season of fresh consumption. Here is an excellent opportunity for housewives who have some free time and would prefer to do their canning in a large way, by planning to enlist for a few weeks of day work or half-day work in the neighbourhood or nearest canning plant.

No. 128. -- We Need Our Libraries

One of Hitler's strong-arm methods of moulding German intellect was the destruction of books. In contrast to this suppression of knowledge in Germany, we learn that in Russia there were close to 78 thousand public libraries in 1939, housing more than 146 million books. The new All-Union Lenin Library in Moscow was designed to hold nine million volumes and was, in structure, the largest library in the world. Illiteracy is being read out of Russia's history. In England, the House of Commons considers public libraries of national importance. The keeping up of morale through

reading and the distribution of information through the libraries is urged by the Government.

In Canada, we had nearly 700 public libraries in 1941, housing over 5½ million volumes. These books were used by a million or so borrowers in that year; with a circulation of 20 million books or about 20 books per person. Of course, we know one person may read only two books in a year while another will devour over 20 or 30. Nevertheless the books are there for everyone's use, pupils preparing a project, young men studying motor mechanics, women learning where to catch illusive vitamins, and shut-ins keeping in touch with the rest of the world.

In addition to the above circulation figure, a great number of people use the reference part of the library where no record of the material used is kept. Magazines and newspaper fall into this class of reading. It is almost impossible to keep up with all the books published on the war and current events, hence pamphlets and magazines are popular.

This war has shown us that technical education is demanding more attention and the librarians in making their reports to the Dominion Bureau of Statistics in 1942 have stated that the increased demand for technical books on anything from aeroplanes to submarines is the outstanding effect of the war on the libraries.

No. 129. -- Pruning Trees

With a few exceptions, trees are best pruned at the beginning of the growing season; an exception being maple (Box Elder) which bleeds or loses sap freely through recently made cuts or wounds when the first movement of sap takes place in the spring. Pruning of maple is best carried out in autumn before leaf-fall, or in late spring after new growth from buds is well started.

The actual time that pruning in general may be undertaken in spring is only relative, but it should be attended to as early in spring as possible after the danger of severe frosts or cold weather is past. It is not advisable to prune frozen stems; the best time to prune them being just as the buds are opening or bursting. If much pruning has to be done, an early start must be made so as not to carry it too far in to the growing season. Early spring growth is important in the life of any plant.

Pruning in early spring, and at the start of the growing season has two chief advantages: 1. The cut can be made where a vigorous bud is located, and from which strong growth in the direction required may be expected; 2. Wounds and cuts made through the removal of small branches will be well on the way to being covered over or healed by the development of new bark before the end of the growing season.

In pruning, the time factor is very important, and both the advantages stated contribute much to the development of healthy, well-shaped trees, with smooth branches and trunks. On the other hand, pruning should not be practised unless the pruning will serve some specific and useful purpose.

Planters should remember that severe and unnecessary pruning has a definitely weakening effect, in that it removes a great deal of stored energy and food, the weakening effect being greatest on the root system. It should for that reason be kept at a minimum.

But judicious pruning also has a stimulating effect, as shown particularly by

the strong growth that takes place where branches of more or less mature trees and bushes have been pruned or cut back. Those responsible for maintaining telephone and telegraph lines located near trees know this from experience. Pruning should, therefore, be practised only where necessary for the development of trees conforming to the size and shape wished. If there are surplus or undesirable branches on them, these should be removed at their points of origin on the main branch or trunk; by doing this further pruning will seldom be necessary.

No. 130. -- Steel of Primary Importance

In peace or war, steel is of primary importance to the industrial life of a nation. In time of war it provides a basic material for the manufacture of shells, guns, rifles, bayonets, bombs, grenades, submarines, aeroplanes, fighting ships, merchant vessels, tanks, bren gun carriers, motor transport vehicles and innumerable other items, without which no fighting force could operate successfully. So numerous are the uses for steel that it would be quite impossible to enumerate them all in the limited space available.

Although iron ore deposits are said to have been discovered in Canada as early as the year 1660, a search through the records reveals that the seed from which our magnificent present-day primary iron and steel industry has grown, was sown in the 1730's. At that stage in Canada's development M. Francheville was granted a license by Louis XIV of France, together with a subsidy of 10,000 livres to work the St. Maurice ore mines of Quebec. The project contemplated the construction of a blast furnace which apparently was not successful, due mainly to the difficulty of obtaining skilled labour. The same fate attended the efforts of other pioneers of the industry.

However, down through the years the difficulties were gradually overcome and the industry was slowly but firmly woven into the fabric of Canadian industrial enterprise. At the turn of the Twentieth Century when Canada was blossoming forth into full flower, the need for steel was great. The Canadian iron and steel industry rose to the occasion and from that time forward has been in the forefront of Canadian industrial expansion.

Although Canada possesses large iron ore bodies, due to the high cost of treatment, it has been found more economical to import high grade ores from Newfoundland and the United States. However, development work has reached an advanced stage on the iron ore body at Steep Rock Lake in northern Ontario. This deposit is estimated to contain millions of tons of very high grade open-hearth ore.

Since the outbreak of the present war the capacity of Canada's steel furnaces has been increased to an annual capacity of almost 3,500,000 tons from the 1939 or pre-war capacity of 2,303,000 tons. Needless to say the 1942 production of iron and steel established new high records.

No. 131. -- "Canada 1943"

The Dominion Bureau of Statistics announces the publication of the 1943 edition of the Official Handbook "Canada". Canada 1943 covers the present situation in the Dominion from Atlantic to Pacific, the weight of emphasis being placed on those aspects that are currently of most importance. So far as space permits, all

phases of the country's economic organization are dealt with and statistics are brought up to the latest possible date. The text is accompanied by a wealth of illustrative matter that adds to the interest of the subjects treated.

The Introduction reviews Canada's war program, covering the development of her Armed Forces, the financial steps that have been taken, and the governmental organizations that have been created with their principal activities. It also reviews Canada's economic condition at the close of 1942. This Introduction is followed by special articles dealing with "Canada's Industrial War Front, 1942" and "Power in Relation to Canadian War Production". The former article treats of the extensive industrial organization that has been developed under the control of the Department of Munitions and Supply for the rapid production of all forms of war munitions.

The chapter material reviews in detail economic conditions under the following headings: Population, Survey of Production, Agriculture, Forest Resources, Fur Production, Fisheries Production, Mines and Minerals, Water Powers, Manufactures, Transportation and Communications, Labour, Employment and Unemployment, Pensions, Construction, External Trade, Internal Trade, Prices, Cost of Living, Public Finance, Currency, Banking, Insurance and Education. All sections of the Handbook are well illustrated by up-to-date half-tone reproductions.

The price of the publication is 25 cents per copy, which charge covers merely the cost of paper and actual press work. The special price concession granted in the past to teachers, bona fide students and ministers of religion has been discontinued in view of the necessity for diverting as large a proportion as possible of Dominion funds to the War, and to the fact that, as far as possible, the sales policy of Government publications should be self-sustaining as regards printing materials used.

Applications for copies of "Canada 1943" should be forwarded to the KING'S PRINTER, OTTAWA, and not to the Dominion Statistician. Postage stamps are not acceptable, and applications must be accompanied by a postal note or by a coin enclosed between two squares of thin cardboard gummed together at the edges.

No. 132. -- Million More Acres for Flaxseed.

Canadian farmers are being asked to grow about a million acres more oil-bearing flaxseed in 1943 than they grew in 1942. Even should the coming season bring only average yields per acre, the added million acres will assure at least as great a volume as was obtained last year, when per-acre yields were much above normal; while should crop conditions in 1943 again favour high yields, the extra acreage now aimed at will make additional quantities of oil-bearing flaxseed available next fall.

The increase in acreage devoted to oil-bearing flaxseed, and the corresponding decrease in wheat acreage to make this possible, says the Minister of Agriculture, bring the objectives set for these crops for 1943 back to the figures set at the close of the Dominion-Provincial Conference on December 9, 1942, namely an increase in flax acreage of approximately 67 per cent and a decrease in wheat acreage of approximately 18 per cent.

At the time of the December Conference, Mr. Gardiner explained, a figure had been set for flax based on the expectation that export requirements in 1943 would be at least equal to those in 1942, but when it later appeared that some difficulty

might be found in marketing as much flax as was produced last year because crushing facilities might not be available, farmers had been asked to go easy in the matter of plans for oil-bearing flaxseed until further announcement could be made.

Negotiations with the governments of the United States and the United Kingdom, the Minister concluded, have now advanced to the point where farmers can be advised to sow an extra million acres of flax with the expectation that all flax grown will be required.

As announced in the House of Commons on January 29th by the Minister of Trade and Commerce, provisions have already been made for taking delivery of flaxseed in 1943-44 at a fixed price of \$2.25 a bushel basis in store Fort William and Port Arthur.

No. 133. -- Day Nurseries.

"Thousands of married women who are now employed in industry and the increasing number still entering industry makes the proper care of their children a major problem," says the Canadian Welfare Council in a memorandum on the place of day nurseries in the war effort. This plan for day nurseries has been authorized under a Dominion-Provincial agreement and has received the enthusiastic support from both welfare organizations and the mothers themselves.

In pre-war days Halifax had one day nursery, three functioned in Montreal, five in Toronto, two in Winnipeg and one each in Ottawa, London, Hamilton, Edmonton and Vancouver. Since the war so many women have gone into industry and defence and munitions that in certain localities day nurseries have become an indispensable part of the war program. In July last year an agreement was drawn up between the Dominion Government and the Provinces of Ontario and Quebec, where the heaviest war industry areas are to be found, which provides financial aid from the Dominion for the setting up of day nurseries wherever the need arises. The term "essential industries" takes in industries contributory to the war effort such as food processing, cafeterias and so on. Or in other words, industries the continuation of which is essential to the war effort.

Full use is to be made of any existing nurseries, nursery schools, church buildings, Sunday schools, etc., in order to save initial expense and cut down overhead, providing the standards and administration are fully approved by the Dominion and the Province concerned. Children admitted will also include those of parents not directly engaged in war work provided there is no waiting list from mothers who are engaged in essential war industries, and also provided that their number does not exceed the total number of children in the nursery.

There is to be no discrimination against any mother wishing to place her child in a day nursery on the ground of nationality, race, religious or political connections. Full charge of the general administration is vested in the Province which must set up a Provincial Advisory Committee, the membership including a representative of the Provincial Department of Public Welfare as well as one nominated by the Director of National Selective Service and approved by the Dominion Minister of Labour.

This agreement between the Dominion and Provinces places no restriction on local groups. Existing nurseries should cooperate as closely as possible with provincial authorities in order that the committee may be recognized as a local committee under the terms of the agreement.

No. 134. -- More About Day Nurseries.

Day nurseries should be located within easy distance of the homes of working mothers and if possible removed from factory districts. Great consideration should be given to the planning or selection of buildings to be used. Those providing for 40 and 50 children appear to give most effective service with economy of overhead. Arrangement of space to allow for proper ventilation, rest rooms, adequate lighting, sanitation, playground facilities and sufficient play space for each child. Allowance should be made for separate rooms for medical examination and for isolation of sick children.

Selection of staff for the nurseries is of utmost importance. A well-trained and fully-equipped personnel is the key to success in an undertaking of this nature. A superintendent chosen for day nursery work must have a broad understanding and knowledge of the individual all-round needs of children at different age levels. She must also have good contacts with and knowledge of outside agencies and groups so as to be in a position to deal with unusual problems.

The need of the older child is also provided for in the Dominion-Provincial Agreement since day nurseries meet only a part of the problem, and provision must be made for care of school age children of mothers who start work as early as 7 a.m. and may not return home until 6 or 7 p.m. For care of these older children it is suggested that church buildings or other organized centres manned by experienced volunteer workers might be pressed into service or that day schools be used and the services of carefully selected teachers, who should be paid for their extra hours of work and called upon only once or twice a week. The Act also allows for provision of a noon day meal for school-age children.

These arrangements raise the work of day nurseries and daytime care of children to a much higher level than previously. The Canadian Welfare Council says in a memorandum recently compiled on the subject: "There is an obligation upon day nursery management to function as an extension of home care through establishing an understanding with mothers that the purpose of these modern day nurseries is to educate and develop the child on its mental, physical and emotional side." Some of these nurseries might eventually expand into permanent educational agencies, serviced by specialists who work for the welfare and advancement of the younger child.

Day nurseries are, therefore, not only assisting in the successful prosecution of the war effort, but contributing an invaluable service to post-war rehabilitation as well by teaching and guiding the leaders of tomorrow.

No. 135. -- Vegetable Seed Production.

Vegetable seed production is comparatively new in Canada. It is true that seeds have been grown in a few centres for a number of years, but the total volume of seed from this source has been relatively small. The bulk of the seed offered for sale previous to the present war was grown in Europe. Because this supply has been almost completely cut off, the demand for home grown seed has greatly increased.

A somewhat similar condition prevailed during the First Great War, but the increased production obtained at that time rapidly fell off when markets again became flooded with cheaper European seed. The aim this time should be, not, "Production for War time", but "Production for all time".

The Maritime Provinces are ideally situated for the production of hardy vegetable seeds such as bean, beet, cabbage, carrot and parsnip. In this respect, Prince Edward Island has already become favourably known for the quality of its parsnip seed and the allotment for 1944 is well over five tons of such seed.

The quality of the seed produced now will largely determine to what extent the markets will be held when the war is over. Thus the only safe foundation for the industry lies in the production of registered seed. Such seed, being of a high standard of purity, will command the respect of the tradesmen and consumer alike on the basis of quality, not price. Many varieties of vegetables are now eligible for registration and pure stocks of varieties are available for the registered grower. Information on the production of vegetable seed is available from the Canadian Seed Growers Association or from the nearest Experimental Station.

No. 136. -- Magnesium.

With the advent of war and the greatly increased demand for metals of all kinds, Canada soon found deficiencies in the supplies of magnesium, tungsten, molybdenum, chromite, mercury, manganese, tin and antimony. Ores of most of these were known to exist so mining companies and prospectors, assisted by officers of the Mines Department of both Dominion and Provincial Governments began an intensive search for new promising geological territory, and the reprospecting of old.

Magnesium was in greatest demand for war purposes. It is used for certain important components of aircraft, such as parts of engines, wheels, structural parts, instruments and furniture. Magnesium forms an essential component of the flares and flash compositions, so vital in night warfare. It also makes the most effective incendiary bomb and thousands of tons have been employed in this manner. Despite the fierceness with which it burns, magnesium is very difficult to ignite and absolutely no danger follows its use in industrial shapes -- rods and sheets may actually be welded using the oxy-acetylene torch.

Despite its rarity in the metallic state, magnesium is one of the more plentiful elements in the earth's crust. If commercial metals only are considered, its abundance is exceeded only by aluminium and iron. Magnesium-containing minerals are widely distributed and, in addition, the sea forms an enormous source; each cubic mile contains more than five million tons -- enough to supply the pre-war requirements of this continent for about a thousand years. Terrestrial deposits consist of dried-up sea beds or sedimentary deposits. In Canada the most abundant source of magnesium is dolomite, which occurs in many locations; for example, the Niagara Escarpment consists of dolomite. In the new plant of Dominion Magnesium Limited, near Renfrew, Ontario, a method developed at the National Research Council uses dolomite as the raw material.

No. 137. -- Manufacturing Magnesium.

Perhaps the most outstanding achievement during the present war in the production of strategic metals is the manufacture of magnesium. It is even more difficult to extract from its ores than aluminum and the process has been learned only in recent years. Canada's attack on this problem is one of the big stories to come out of the war.

The hero of the tale is a young chemist named Dr. Lloyd Pidgeon, employed by the National Research Council since 1932. In 1937, General A. MacNaughton, foreseeing the importance of magnesium invited Dr. Pidgeon to concentrate his efforts

upon the subject of this little known metal. Dr. Pidgeon devoted his full time to the task and developed and proved his process for extracting magnesium metal from the ore about two years ago, but his method then was still in the laboratory stage and remained to be tested and proved commercially. Early last year that test was passed and the first public announcement was made that Canada could now produce its own magnesium. Almost immediately the plant was constructed at Renfrew, and today the plant is meeting not only the war requirements of the Dominion but is also yielding a certain surplus for export to the Allies.

Up to the beginning of the war the most authentic information about magnesium was in the hands of the Nazis. Today metal producers in Canada and the United States can, using the Pidgeon process, extract magnesium from ores efficiently and on a commercial basis. Although full details of the process will not be made public until after the war, it is known to be essentially simple, drawing on the technique of known processes and methods already established in the mining industry.

Magnesium, derived from the word magnesias, which is said to have been obtained from the Province of Magnesia in Thessaly, is silvery white in its pure state. It is lustrous, moderately hard and can be hammered, rolled, filed and polished without much difficulty. Magnesium salts are used to a considerable extent in medicine. The original use for the metal, however, was in pyrotechnics, and it was produced during the last war until the guns stopped firing. During peacetime there was no commercial production and very little commercial use in Canada. Canada's problem with magnesium has not been one of scarcity, for the metal is to be found in dolomite in every Province. There are also literally millions of tons in the serpentine deposits from which asbestos is recovered in Quebec. The great difficulty was one of technique and this has been satisfactorily solved, thus demonstrating the possibilities for meeting the entire metal emergency through scientific developments.

No. 138 -- Crude Rubber from Kok-Saghyz.

When the Japanese occupied the East Indies in 1942 about nine-tenths of the world's natural rubber supply to the United Nations was cut off. With a full realization of what this situation meant, Science and the Experimental Farm Services of the Dominion Department of Agriculture in cooperation with the National Research Council began to give consideration to obtaining a Canadian supply of natural rubber, which it is necessary to use with synthetic rubber in order to make the latter usable in a practical way for certain essential uses.

It was known that Russia had for some years been obtaining a supply of natural rubber from the Russian dandelion known as Kok-Saghyz. A limited supply of Kok-Saghyz seed was obtained from the United States Department of Agriculture in the spring of 1942 and planted in quarter-acre plots at eight Dominion Experimental Stations across Canada. The plantings were made for the dual purpose of producing seed and roots, as it is from the latter that natural rubber is obtained. The growth on the experimental plots was fairly encouraging last year, both for seed and roots. The important part of the plant for rubber is the rhizome or root which extends deeply into the soil.

Data from six of the eight farms and stations where plantings were made have been assembled. The Central Experimental Farm planting returned on an acre basis at the rate of 8,100 pounds of roots, Kentville, N.S. 6,200 pounds, St. Clothilde, Que. 5,100 pounds, Lethbridge, Alta. 4,600 pounds, Agassiz, B.C. 3,900 pounds and Winnipeg 1,600 pounds, or an average of 5,100 pounds. These figures compare

favourably with production of Kok-Saghyz in Russia, where 4,000 to 5,000 pounds of roots per acre are reported and with about 5,000 pounds per acre where it has been planted in the United States.

There was considerable variation in the rubber content from the roots grown in Canada, varying from two to seven per cent. Some seed was harvested from the plots and with it and what has been obtained from Russia and the United States enough is available at present for planting 35 acres this spring at nine experimental farms and stations. Should this year's plantings prove satisfactory it is hoped soon to have enough seed for commercial production.

No. 139. -- More About Crude Rubber from Kok-Saghyz.

Meanwhile intensive experiments and tests are being made in connection with every phase of production by the Division of Botany, Science Service, working in cooperation with the Experimental Farms Service, while the National Research Council has undertaken the work in connection with the extraction of this natural rubber. The cooperative program includes such features as the selection and anatomy of Kok-Saghyz, for it is a new-comer to Canadian agriculture. The biological characteristics and cultural peculiarities of the plant have to be learned. Then there are cultural seed gathering and root harvesting methods to be tried and tested, genetic studies made, breeding methods and physiological problems investigated. It is a somewhat similar job to that which the different services of the Dominion Department of Agriculture have been doing in the past 50 years in connection with the now famous varieties of wheat and other grains, vegetable fruits, flowers and other products.

So far the limited extent to which the cooperative research work has been undertaken has offered a considerable measure of encouragement.

Kok-Saghyz was first found in 1931 near Tien Shan, Kazakhstan, near the border of China. Even with its comparatively low yield of six to twelve per cent raw rubber the cultivation of the plant is practicable, because its growth appears to be dependable and it produces good seed. Its winter hardiness in different parts of Canada has yet to be determined.

In Russia it has been found that if the crop is harvested at the end of the first year, plants yield an average of 4,500 to 5,500 pounds of cleaned roots per acre, which equals 150 to 200 pounds of crude rubber and 75 to 100 pounds of seed. If the crop is left for a second year, the average yield is 2,700 to 3,600 pounds of roots and from 100 to 150 pounds of seed per acre. In some cases the yield at the end of the first year is as high as 7,000 pounds of root, which, of course, gives an even larger amount of rubber. At the end of the second year, the percentage of crude rubber is higher, but the yield of roots is less since the plants have been thinned out by the frosts of the preceding winter and other causes.

Another related program of research work is being carried out by the Science and Experimental Farm Services in cooperation with the National Research Council in connection with milkweed. The leaves and stalks of this weed contain a percentage of crude rubber and the floss from the seed pods can be used for the same purposes as Kapok, an East Indies product. Ten acres of milkweed are to be sown this year at the Central Experimental Farm, principally for the production of seed and floss.

With continued success our cars may yet go rolling along on dandelions and milkweed.

No. 140. — A Problem Child.

Here is an intriguing story of an unwanted molecule. It is a story based on facts, and worth passing on to you.

The heroine is named Lignin. For more than a hundred years, it seems, chemists had done their best to ignore her. Being more than ordinarily obstinate, however, she persisted in popping up in laboratories all over the world, until she had research men literally tearing their hair. Her extreme unpopularity might possibly have been because she was not as attractive as certain other little molecules, for she usually made her appearance in the form of a thick, sticky brownish black syrup. Then again her choice of perfume did nothing to win her friends. Optimistic chemists put her through one chemical bath after another, but she always came out of them smelling as bad as ever. They callously threw her into the river, but she had those looks that kill and the fish all curled up their tails and promptly died. She was indeed a problem child.

What good was she, you ask? Well, it seems that without Lignin we would have no trees. Wood is made up of woody cellulose fibres and Lignin is what holds them together. She gives wood its strength and resistance to exposure. As you know, Canada is one of the world's largest pulp and paper producing countries. This industry depends solely on trees for its existence. Imagine how much Lignin our chemists have had to deal with in a year! The only way she could be disposed of was by burning her alive. So annually millions of tons of Lignin went up in acrid smoke.

In the case of coal tar, a by-product of the process that turns coal into coal gas and coke, persistent chemical research showed the tar to have more versatility than the coal itself. Hitherto considered an "abominable nuisance", coal tar gave birth to creosote and benzene, raw materials for explosives, valuable dyes, drugs and perfumes. It begins to appear that Lignin has the same vast range of possibilities. The first commercial product to be prepared from this mysterious molecule was vanillin, the synthetic that makes vanilla flavouring. Today almost 50 per cent of the market demands for vanilla flavouring or about one-fourth million pounds used annually in ice cream, candy, chocolate, milk shakes and bakery products, etc., is supplied by vanillin. After the vanillin has been extracted from ligninsulphonate, the original material is still in the form of fibrous pulp. It is in this mass that the chemical research workers think they have a real find. In their opinion it might easily develop into THE plastic of tomorrow.

Already lignin plastic can be produced in sheet form and powders for pressing or molding any number of useful items. It also appears in the form of fibre-board. When several sheets of this are hot pressed together they shrink to one-third their original size and produce a material only half as heavy as aluminum, one fifth as heavy as steel yet with an equal strength, non-warping, non-rusting, with good electrical insulating properties, easily coloured and possessing great resistance to heat, cold and chemicals.

So that is the story about Lignin, the unwanted molecule, but actually her biography cannot yet be written. For her, life is only just beginning.

No. 141. — Fish Families.

Canada's vital statistics haven't yet been carried to the point where they show the birth rate for fish for the country's different waters, and never will be,

but at least it is known that the increase in trout and salmon population in Maritime Province streams through artificial propagation was bigger last year than it had been in 1941. Which is another way of saying that in seeking to help the commercial fishermen and the anglers the fish culture staff of the Dominion Department of Fisheries distributed more than 32,500,000 young trout and salmon in selected Maritime areas where fisheries are under federal administration, as compared with some 28,600,000 in '41.

Some of the fish were fry which had very recently been hatched in the incubating troughs of hatcheries operated by the Fish Culture Branch but more than 25,000,000 of them were "fingerlings", which had been held in hatchery rearing ponds until they had reached that stage of growth. A couple of hundred thousand or so were salmon and trout which had already passed out of the baby class -- fish which had been held and fed in hatchery rearing ponds for a year or more.

It goes without saying that not all of the 32,500,000 little fish that were used in stocking streams will live to maturity. No fish were placed in waters which had not first been carefully examined as to their suitability as homes for more fish but, nevertheless, there was bound to be a measure of mortality among the newcomers. Some of the fish youngsters, like all young creatures when "on their own" for the first time, will make mistakes which will be too much for them. Inescapable natural causes will take substantial toll, even from among the prudent. It is still true, however, that great numbers of these hatchery-born fish will grow in due time into vigorous, gamy maturity, to the benefit of the commercial salmon fishermen and the trout and salmon anglers.

Although more fish were distributed from the hatcheries in the '42 stocking program than in the year before, the collection of eggs for incubation showed a decrease and totalled 59,465,000 in round numbers, as against 63,699,000. But that was not because anybody "fell down" on the collecting job. The reduction in total number was a planned reduction, planned because some circumstances existed which made it uncertain whether, for the time being, more than 60,000,000 eggs could be satisfactorily handled.

Speckled trout eggs made up well over half of the collection, or about 36,166,000. Atlantic salmon eggs numbered 22,964,000. There were also about 189,000 Sebago salmon eggs, and the remaining 145,000 or so were eggs from Rainbow trout. Atlantic salmon eggs were collected in all three of the Maritime Provinces and so, too, were Speckled trout eggs, although more than half of the latter were obtained at the rearing ponds of the Antigonish hatchery. All of the Rainbow eggs were collected at the St. John hatchery ponds. In the case of Sebago eggs the collections were made at Grand Lake, N. S., and the Chamcook Lakes, N. B.

No. 142. -- Food Program for 1943.

In a foreward to "Objectives for Canadian Agriculture", just published in pamphlet form, Hon. J. G. Gardiner, Dominion Minister of Agriculture, tells of the immensity of Canada's war effort in food production and of the valiant part in the task shouldered by the farmers of Canada.

"It is a challenging program", declares the Minister. "It calls for larger quantities of foods than Canada has ever undertaken to produce before -- particularly meats, dairy products, eggs, fresh fruits and vegetables. These foods are urgently required to meet Canada's needs for the civilian population, for the armed forces of Canada, for ships' stores, for the Red Cross, and for export commitments to

Great Britain and others of the United Nations.

"Each year since the war began, farmers throughout Canada have contributed notably to the war effort by increasing their output of those food and fibre products called for. And by 'farmers' I mean not only the men on our farms but also the women, the boys and girls, and even the older folk who in normal times would be taking things a bit easy after a life of toil. All these have laboured valiantly in the cause.

"By dint of hard work and long hours on the part of these farm folk and of favourable weather conditions granted by Providence record volumes of foodstuffs were produced in Canada in 1942, and it will not be easy to achieve further increases in 1943. Favourable factors are that live stock and poultry numbers are at peak levels and that the bountiful harvest of last year ensures plentiful supplies of feed; unfavourable factors are shortages of help on many farms and difficulties of getting new machinery to replace lost manpower."

After referring to the drawing up of the program at a conference between Dominion and Provincial agricultural officials and representatives of farm organizations for the guidance of agriculture in 1943, Mr. Gardiner continues "It is fully realized that maximum effort will be required to produce the volume of food outlined in this program -- an effort that will tax the resources of every farm. No one, however, can be expected to do more than his or her best. It is recognized that more than is now being done on many farms cannot be expected, but it is also believed that on others and in some areas, live stock production can be increased. Nothing less than everyone's best is counted on for this critical year. Canadian farmers have met every challenge in the past. Given a favourable season and the help that people of the towns and villages can give in their holidays or other spare time, I am confident that the farmers of Canada will reach the high objectives set for 1943 if it is humanly possible to do so".

No. 143. -- Scouting.

Canadian membership in the world-wide organization of Boy Scouts totalled 85,729 in October last year. The 5,600 decrease from the previous year's membership reflects the drain of enlistments in Canada's Armed Forces. Despite continuous efforts being made to replace those older members the difficulty of finding substitute leaders to carry on has led to the temporary suspension of many packs and troops. This condition was especially serious in the smaller Prairie communities where maintenance of adequate field work presented a major problem.

The Boy Scouts ~~was~~ founded in England by the late Lord Baden-Powell in 1908. Almost immediately the Canadian Branch became active and in 1910 the governor-general became president of the Canadian Association. Since that time each of his successors has been chief scout of Canada. The admission of younger boys was provided for in 1916 by the Wolf Cubs branch and the retention of older boys in 1918 by the Rover Scouts branch. Wolf Cub membership in Canada which takes in boys between the ages of eight and eleven and a half years totalled 39,351 at the end of October 1942, showing a decrease of some 200 compared with 1941. The Boy Scouts including boys from eleven and a half to seventeen years numbered 37,744 as against 41,866 in the previous year, while Sea Scouts totalled 859, showing a decrease of 115 members.

These figures do not include the many thousands of adults who have a direct interest in scouting through their membership in various boards and committees.

Scout work attracts men from all walks of life from plumbers and trainmen to lawyers and bankers, who devote anywhere from two to five nights weekly all year round to training boys to become superior citizens. However, the war has resulted in a tragic shortage of trained leaders and recently women have dared to enter the field and offer their services. At the present time there are only a few Lady Scoutmasters in Canada but in England they have been active in the movement since the first days of its inauguration.

"Be Prepared" and remember to "Do a Good Turn Every Day". In short, Carry on, Boys!

No. 144. -- Cold Storage Fruit.

Preservation of fruit by cold storage is one of the most important advances in the keeping of foods. Fresh fruits are quickly perishable, and soon reach a stage of over-ripeness when held at high temperatures. Because of this fruits such as strawberries, raspberries, cherries, and peaches are shipped to distant markets in iced refrigerator cars maintained at temperatures around 40 degrees F. By this procedure markets more than 2,000 miles away can be reached and the fruit delivered in perfect condition. Without such cooling, distribution must be restricted to a few hundred miles and fruit may even then become too ripe in transit, resulting in loss to distributors and disappointment to consumers.

Refrigeration during storage and transit slows down the processes of ripening in fruit and thus permits harvesting in a mature condition, with more quality than would otherwise be possible.

Pears are not quite so perishable as stone fruits but it is often necessary to hold them in cold storage for a time to allow for suitable distribution in prime condition. For example, if Bartlett pears are held at living-room temperatures after picking they will ripen and become over-ripe in about 16 days. By means of 32 degrees F. cold storage, however, the keeping life of Bartletts may be extended to permit delivery to the consumer in ideal condition during a period of two months.

By the use of cold storage facilities apples can now be delivered to the consumer in excellent condition over a long marketing season. Two of the favourite varieties are McIntosh and Delicious which come on Canadian markets in September. These varieties ripen very rapidly at orchard temperatures in the fall, and without being placed in cold storage keep in sound condition for only a short time. However, when placed in storage at 32 degrees F., promptly after harvest, McIntosh will keep in good crisp condition till January and Delicious till the first of May.

To protect quality in fresh fruits and to ensure delivery of fruit to consumers in good condition, most wholesalers make use of cold storage. Some progressive retail stores display fruit in refrigerated show cases and keep stock in "cooler" rooms. Wise consumers have also learned that many fruits taste best when served fresh from the refrigerator.

No. 145. -- Dressing for Dinner.

So, you're dining out this evening! Which gown will you choose -- your new one, your blue one, or the one you wore last? But wait a minute! That was last year! Today, if you've managed to wedge an evening's entertainment into your

crowded schedule of overtime at the office, Red Cross activities, canteen duties and other war work, what to wear will still be the question but the answer will be different. You'll probably waver between the little suit you pieced together out of Dad's old blue serge, and the living room drapes which you ingeniously converted into a becoming "tea time" frock.

Women always have been and always will be clothes conscious but that doesn't mean a shopping spree before every date. This year, like their husbands and brothers, they are mastering the art of camouflage or "making something what it aint". Unnecessary buying is out for the duration. It's not only patriotic to "make things do", it's wise planning, it's shrewd foresight, it's practical.

The Women's Factory Clothing Industry in Canada is big business. There are over 670 establishments catering to the whims and fancies of madame. In 1941, after little more than a year of war, about 25,000 employees worked to produce \$94 million worth of women's and children's garments. Montreal and Toronto are the two main centres of the industry, controlling 90 per cent of the business of the entire Dominion.

Each year of war, however, has brought about many changes. Materials have been diverted into military channels, labour has followed and retailers and consumers are only beginning to feel the effects. To date, no system of rationing has been introduced in the clothing field, but women everywhere are anticipating the pinch of war-time conditions and preparing for it sensibly by getting along with less, scouring trunks and attics for raw materials and taxing their ingenuity in making new things from old. Try it! It's real economy. It's even fun!

No. 146. -- Bacon for Britain.

By saving an extra pig or so per litter this spring, one million hogs can be added to summer and fall marketings. A little pig may not seem important but if it is developed to a market weight of 200 pounds it will supply the bacon ration for nine people in Great Britain for one year. Every farmer in Canada is asked to do his utmost this year to save more of the pigs farrowed. Britain wants 675,000-000 pounds of bacon and pork products from Canada by November, 1943. To meet this request and meet Canadian requirements will need the marketing of 8,000,000 hogs in 1943, compared with 6 $\frac{1}{4}$ million in 1942. This will necessitate a fairly substantial increase in every province.

According to the Current Review of Agricultural Conditions in Canada, of the required increase of one and three-quarters of a million head, approximately two-thirds might be produced in Western Canada and the remaining one-third in Eastern Canada. The various provincial objectives show an average increase of 22 per cent for the five eastern provinces and 33 per cent in the four western provinces. Among the Prairie Provinces, Saskatchewan is expected to show the greatest increase.

At the Dominion-Provincial Agricultural Conference held in Ottawa last December, it was pointed out that the reason why the British Ministry of Food is anxious to obtain so much bacon from Canada is because the Dominion produces the kind of bacon the British people want. Canadian bacon is a part of their ration which is built on nutrition requirements and while fat is needed for various purposes it is not required in greater amount in bacon. It is provided in the contract that the quality of Canadian bacon be maintained and the weights of sides are established.

"Adjustments of standards have increased the average weight of our pigs 13 pounds", says the Deputy Minister of Agriculture, "with the result that the Bacon Board is experiencing increasing difficulty in obtaining the grade of bacon necessary to meet the terms of the contract. We have to date satisfied the British with respect to the quality of this, perhaps, our most important product and we cannot afford to jeopardize our post-war position by sending the British people heavy, fat bacon which they do not want, as was done in the last war."

No. 147. -- Grain Cleaning Plants.

The demand for well graded seed grain free from weed seeds has in the past ten years stimulated the use of modern grain cleaning equipment throughout the country. In order to meet this demand and further to encourage the thorough cleaning of all seed grain, considerable financial assistance has been given by Federal, Provincial or Municipal Government Institutions in setting up permanent cleaning plants in grain growing areas, or by making cleaning equipment available to growers through the medium of portable plants, according to the Central Experimental Farm, at Ottawa. The latter practice has become popular particularly in parts of Western Canada. Co-operative cleaning plants, which are owned and operated by the farmers themselves, are in operation in many parts of the country. Privately owned plants have, in some districts, been responsible for the development of seed centers which have become well known in the production of high quality seed.

In a recent survey of cleaning plants in Canada there were found to be over 800 plants serving the farmers. By far the greatest number of these are in the Province of Quebec where 590 are said to be in operation. Ontario has 92, Manitoba 31, New Brunswick 29, Alberta 15, Saskatchewan 16, British Columbia, 12, Nova Scotia 10 and Prince Edward Island 5. Figures are not available to show the amount of seed grain cleaned through these plants in each Province, but in Ontario, the Minister of Agriculture's Reports of 1942 states that "during the nine-year period 1933-1941, 92,669 farmers were served by 90 plants" and that 5,438,539 bushels of grain were cleaned during the period as well as 31,021,925 pounds of clover and grass seed. Reports from Quebec show that from the 1940 crop, the cleaning plants handled over 960,000 bushels of grain including flax, as well as over 1,700,000 pounds of small seeds.

In the Saskatchewan 26th Annual Report of the Department of Agriculture 1931, the amount of grain cleaned that year by 13 Municipal cleaning plants is given as 240,491 bushels. In the 1941 Report from the same Province, the quantity of grain cleaned in 1940 from 25 similar plants is given as 764,240 bushels or an average of 30,569 bushels per unit. These figures indicate that the practice of using cleaned seed is not only well established but steadily growing.

Many farmers have purchased small grain cleaning mills as part of the regular farm equipment. Such an expenditure might well be considered a good investment, particularly in localities some distance from a commercial plant.

No. 148. -- Royal Canadian Navy.

The operations of the Royal Canadian Navy are of necessity veiled in the deepest of official secrecy. Occasionally, however, the veil is lifted to reveal successes against Axis craft so that Canadians may know that the men and ships

flying the White Ensign under the command of the Royal Canadian Navy are doing their job and doing it well. When the world conflict has been brought to a successful conclusion and the complete story of its contribution to world salvation is told, it will be a thrilling one. Canadians who are facing death and hardship on the high seas in order to preserve our freedom are adding a glorious chapter to Canadian history.

While only 32 years old -- a comparatively short span of time -- the Royal Canadian Navy has inherited the centuries of experience, training and tradition of the Royal Navy. The R.C.N. was formed in 1910, two cruisers, the Niobe and Rainbow, having been acquired from Great Britain. When the First World War broke out two over-age cruisers and an antiquated schooner comprised its total strength. Many small vessels were acquired and by 1918 the Navy was composed of 140 ships. They were used chiefly for minesweeping and anti-submarine patrol.

At the outbreak of the present war there were only 15 vessels in operation, consisting of six destroyers, five minesweepers and other small vessels. At the end of January 1943, the R.C.N. was operating more than 500 ships -- a spectacular growth. These included destroyers, corvettes, auxiliary cruisers, minesweepers, sub chasers, patrol vessels, and small craft of various types. At the time of writing the personnel of the R.C.N. had been increased from a pre-war strength of 1,800 to 52,000.

The task of the R.C.N. is three-fold: guarding Canadian shores, protecting merchant shipping and cooperating with the sea forces of the United Nations. The Navy's most important task has been the convoying of merchant vessels. It has been 99 per cent successful in this task. It has borne as much as 47 per cent of the burden of the convoy work, aided in guarding 12,000 vessels carrying 65,000,000 tons of cargo destined to the United Kingdom.

The Canadian Navy is being rapidly augmented by the output of Canadian and British shipyards. A flotilla of eight Tribal Class destroyers is being built for the R.C.N. Already two ships of this class have been commissioned and are in service manned by Canadian seamen.

No. 149. --- Canadian Army in Britain.

The Canadian Army has been in Britain for more than three years, ready to repel any attack, and preparing to launch an offensive when the time is ripe. A noted London newspaper columnist recently described the Canadian Army as a "revelation, a wonder of scientific skill." Canadian soldiers have taken part in raids on the European coast. Apart from the Dieppe engagement the Canadian raid on Spitzbergen was the largest raid of this nature.

Canadian soldiers are serving or have served in Newfoundland, Iceland, Alaska, the West Indies and Bermuda. Troops called up for home defence duty, who have not volunteered for overseas services, have been sent to Newfoundland, Alaska and the United States. Troops sent to the United States have been used in escorting prisoners of war. Some of the home defence units sent to Newfoundland replaced platoons who had been serving there and had been sent overseas as reinforcements.

Canadian engineering units have built roads in Britain and have worked on the fortifications of Gibraltar. Canadian forestry units have set up lumber camps and mills in Scotland. This task is particularly important in wartime, as it conserves

valuable shipping space which would otherwise be taken up by many thousand board feet of lumber.

All Canadian Army training is closely co-ordinated with that of Britain and the United States. Training in Canada is integrated with training in Britain and there is an extensive two-way exchange of officers between the Canadian Army in Britain and the Canadian Army in Canada.

Training of Canadian recruits is carried out at two types of centres, basic and advanced. At one of the numerous basic training centres in the Dominion the recruit is taught the fundamentals of soldiering: discipline, rifle drill, the use of modern weapons, map reading and field manoeuvre. When the soldier from a basic training centre moves to an advanced centre he learns the art of his particular arm: artillery, engineers, signals, or other branch of the service.

Reserve units of the Army are formed into 11 brigade groups across the Dominion. More than 110,000 men are working in civilian occupations by day and training for home defence at night. Large numbers of reservists join the Active Army each month. Reserve units are given regular weekly training periods, as well as an annual training period in camp. Equipped with some of the latest devices of modern warfare, rigorous training is undertaken by the Reserve Army.

No. 150. -- Canada's Airmen.

The British Commonwealth Air Training Plan is a joint enterprise of the Canadian, Australian, New Zealand and United Kingdom Governments, and trains airmen from nearly all parts of the British Commonwealth of Nations. The Plan itself is essentially Canadian and it is administered by the Royal Canadian Air Force. Sixty per cent of the graduates are Canadians.

Under the original agreement Canada paid more than \$600,000,000 of the total \$900,000,000. This original agreement was intended to continue until March, 1943, but a new agreement was signed in June, 1942. It became effective July 1, 1942, and operated to March 31, 1945. Under the new agreement, the Plan is considerably enlarged. It will cost \$1,500,000,000, fifty per cent of which will be paid by Canada. The United Kingdom will pay the remaining fifty per cent, less deduction representing payments made by New Zealand and Australia for the cost of training aircrew.

From the schools of the British Commonwealth Air Training Plan comes an ever-growing proportion of the aircrew required to man the planes on the fighting fronts. Students come from all of the United Nations. The first member of the Royal Australian Air Force to win the V.C., Flt.-Sgt. Rawdon Hume Middleton, was trained in Canada.

Every single day in Canada men training fly more than 2,000,000 miles. More than 10,000 airplanes are in use in the Plan. If the paved runways of the flying stations were laid end to end, they would form a 12-foot wide highway from the Atlantic to the Pacific. Scattered between stations all across the Dominion, the buildings of the Plan are the equivalent of about 110 good-sized towns and villages, complete with all facilities for working, living, medical care and entertainment.

From Canada's Air Cadets will come many of its future airmen. More than 21,000 boys are enrolled in 259 Air Cadet Squadrons. Strength of the Cadets will expand to 35,000 within the next few months. For Cadets who attain a satisfactory

standard of training, summer camps are provided. Boys who join the Air Cadets must be between the ages of 15 and 18, and must pass an examination similar to that set for aircrew duties in the R.C.A.F. Equipment is provided and training is given in navigation, map reading, aircraft recognition, signalling, target shooting, first aid work and foot drill.

No. 151. -- Women in the Forces.

Increased emphasis is now being placed upon recruiting women for the armed services so that more men may be released for more active tasks in fighting forces. National Selective Service is lending its support to recruiting women and on February 22, commenced interviewing those interested in obtaining information about the women's armed services at Employment and Selective Service offices throughout Canada. The Women's Royal Canadian Naval Service, the Canadian Women's Army Corps, and the Royal Canadian Air Force (Women's Division) have set 50,000 as their combined enlistment objective for 1943.

The Women's Royal Canadian Naval Service was organized in June last year and by the end of February, 1943 had attested 1,328 and called up 90%. There were 59 officers, eight cadets taking officer's training courses and 840 ratings or "Wrens". Training for ratings is conducted at Galt, Ontario, and officers' training is given in Ottawa. The majority are now engaged in about 27 trades, replacing various categories of naval personnel in shore establishments. The W.R.C.N.S. hopes to enlist 5,000 by the end of 1943.

Since the Royal Canadian Air Force (women's Division) was established in July, 1941, more than 10,000 women have enlisted. This shows a steady increase from 3,606 at April 30, 1942, and 8,500 at December 31, 1942. An enlistment quota of 20,000 has been set for 1943. Ceremonies were held in February in Vancouver to mark the formal attestation of the 10,000th recruit into the R.C.A.F. (W.D.).

Organized in September, 1941, the Canadian Women's Army Corps had enlisted 2,700 by May 1, 1942, and recruiting advanced rapidly until there were more than 9,500 by the end of February, 1943. The C.W.A.C. hopes to enlist 25,000 by the end of 1943. Members are in more than 50 trades, serving in Britain and the United States as well as in Canada.

The possibility of the formation of a reserve Canadian Women's Army Corps and a girl Cadet Corps was announced recently by the director-general of the Reserve Army in Canada. The proposal is awaiting government decision.

No. 152. -- Canadian War Nurses.

Nurses wearing Canadian war uniforms now number about 2,075. The Royal Canadian Army Medical Corps has enlisted more than 1,450, with 813 in Canada and 641 overseas. About 280 are now serving with the South Africa Military Nursing Service. Functioning under the R.C.A.F. Medical directorate, the Nursing Service of the R.C.A.F. has 221 nurses on duty, nine overseas and 13 in Newfoundland and Labrador. The Royal Canadian Navy has about 120 nurses serving temporarily under the R.C.N. medical directorate.

There are 26 women doctors serving with the armed forces, 15 in the R.C.A.M.C., 10 with the R.C.A.F., and one with the R.C.N. Several women enlisted as privates

in the R.C.A.M.C. in the fall of 1942 to complete their medical training and obtain their doctor's degree. Like some 800 male medical students who enlisted at the same time, they could only be taken on strength of the R.C.A.M.C. 24 months previous to being eligible for appointment in the army, navy and air force.

The first contingent of the Canadian Red Cross Corps to be sent outside Canada arrived in Britain during the first part of February. The group included representatives of the transport, nursing auxiliary, office administration and food administration sections of the corps.

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