

Two Voices on Nutrition

By L. B. PETT and ALICE WILLARD

I CANADA'S OFFICIAL FOOD RULES

By L. B. PETT

THE whole civilian population is important in this war, not just the fighting forces, because adequate production of machines for a modern army is going to be the chief factor in winning the war. This production of machines, and the transportation for them, is the job of the whole civilian population, directly or indirectly. Adequate production calls for stamina, courage, efficiency and general well-being, and all these qualities can be influenced by food. Here we are not so much concerned with the *amount* of food, important as that can be; here we are concerned with the *kind* of food.

Malnutrition, especially related to the *kind* of food selected and how it is prepared, is right now sapping the strength of the Canadian public, and of other peoples in the world. It is characterized by various deficiency diseases such as rickets, scurvy, or even pellagra. More commonly it shows itself in lowered resistance to infections, digestive disturbances, fatigue and other evidences of lowered health. This malnutrition in Canada is caused by a lack of information by faulty food habits (fads, etc.) by indifference, and by economic circumstances. These factors are keeping thousands of Canadians from the health they could have if they were eating the right kind of food, prepared in the right way. All this makes it difficult for Canada to attain or to maintain the desired war production. It will also have an effect on future generations.

If everywhere in Canada food were adequately produced, properly handled,

wisely selected, and prepared so as to be appetizing and attractive and also full of its original nutritive value, then food and nutrition would write a new story in health and happiness for all our people.

Canadian Surveys

How do we know that this subtle type of malnutrition is serious in Canada? There are several points of evidence. In 1936 Sir John Orr said of Great Britain: "It thus appears that the diets of 50% of the population of the United Kingdom fall short of the desirable standard. . . ." In 1941 the U.S. Department of Agriculture Misc. Pub. 430 said: "About one-fourth of the families in the United States have diets that could be rated as good; more than a third, diets that might be considered fair; another third or more, diets that should be classed as poor." In 1939-40 the Canadian Council on Nutrition sponsored a series of surveys all across Canada, to find out exactly what representative families were eating and whether it was what they should be eating. Other surveys of a less detailed nature have been carried out in Canada, but the results are all very similar.

Only about 40% of the people studied could be considered adequately nourished. Another 40% were considered to be in a "border-line" condition. The remaining 20% were seriously undernourished.

These Canadian surveys show the exact dietary constituents that were lacking in the food eaten by these representative families. These are, beginning with the most serious and in descending order (1) the B vitamins, (2) Vitamin C, (3) Calcium, (4) Iron, (5) Vitamin A, (6) Protein. Nutritionists, dietitians and doctors can interpret such terms, but the homemaker must get them translated into terms of food.

Canadian Nutrition Programme

In order to give the Canadian people proper information on nutrition there is

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now being organized the Canadian Nutrition Programme. Material and advice come from the central federal office for nutritional work (Nutrition Services). Provincial Nutrition Committees are being formed to coordinate the work of various groups in each province. Interested people are urged to form Community Nutrition Programmes. All this structure is designed to bring reliable information into the home. A printed outline of the Programme is available from the Provincial Departments of Health.

This printed outline also mentions the nutritional principles to be emphasized in the Canadian Nutrition Programme, and these nutritional principles are quite simple. These are the things that any housekeeper should try to remember. These are the things that everyone, whether eating at home or in restaurants, or out of lunch pails, should try to remember and follow because they mean better health and more happiness. They are summed up in what are known as "Canada's Official Food Rules," and are pictured on the cover of this issue.

These simple rules for daily healthful eating are the foundation stone of the educational work planned for the Nutrition Programme. There can be no doubt that their use by everyone in Canada, every day would make a great difference in health and happiness.

Causes of Malnutrition

Some people doubt whether lack of information is really fundamental to the malnutrition found in Canada. It is pointed out that various economic surveys show better-nourished families as the income rises. It is also true that as food expenditures rise there is a tendency to be better-nourished.

On the other hand all these surveys show some families who are adequately nourished on quite low food expenditures, and also other families who are very poorly nourished on rather high food expenditures. It is clear from these cases that where some information has been intelligently applied, more efficient expenditure of the food money results. Furthermore,

welfare workers often point out that when a family's income rises the extra money is usually spent on other things before food, and that when food is finally included in the extra expenditure, the articles purchased in many cases are not Protective Foods.

There can be no doubt, therefore, of the value of trying to get everyone in Canada eating more of the Protective Foods, as outlined in Canada's Official Food Rules. Aside from health, there may also be opened up a whole new field of agricultural development in response to the suggestions of nutritionists and the demands of the public. In this way Canadian Nutrition is moving forward today.

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THE SPUR TO BETTER NUTRITION

By ALICE C. WILLARD

THE very widespread and general interest in nutrition which has developed since the opening of the war owes its awakening to many factors. Among the most important of these a few may be mentioned. In the first place the number of rejections necessary among young men enlisting for active service presented a most unflattering picture and it is generally conceded that inadequate nutrition has played an important role in producing this situation. Argument in support of such causal relationship is furnished by dietary surveys which have demonstrated that food intake among Canadians does not measure up to generally accepted standards. In the third place knowledge of actual human nutritional needs has developed very rapidly in the last few years. This has been possible largely as the result of notable successes in synthesizing many of the vitamins, thus permitting vastly better controlled and more convincing experimental procedures both with laboratory animals and with human beings. Perhaps a fourth asset should be added. Methods of analysis for the

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vitamin content of foods have developed very extensively as have also tests for the quantitative estimation of human needs. Consequently increased confidence can be placed in the validity of certain rule of thumb means for securing these needs from common foods. *Food and Health in Peace and War* published under the auspices of the Canadian Medical Association lists the foods and amounts that will provide all essentials.

In arranging a dietary the foods to be stressed are milk and cheese; whole grain cereals and bread; vegetables, especially green or yellow; fruits, particularly citrus types and tomatoes; meat, with emphasis on the value of liver; eggs and butter. In goiterous regions iodized salt has proved of great value. These are the so-called "protective foods" and all should be used every day. It would be quite possible to construct the entire dietary from them. The use of other fats and sweets in moderation will provide greater variety and may lessen cost. The cheapness and high food values of dried legumes such as beans, peas and lentils would justify a much more extensive use of these foods.

In addition to the assurance of nutritional adequacy aimed at in using the protective foods in generous proportions, a consideration of relative costs of food essentials from these various sources is interesting. Grains are the cheapest sources of calories and protein. Milk and cheese provide calcium and phosphorus at lowest cost, while vegetables are the best investment for iron. These are commodities of relatively stable price. There is more fluctuation in the cost of ascorbic acid from various sources. Citrus fruits, tomatoes, potatoes and cabbage vie for first place here, but occasionally strawberries can claim the honour. Local conditions and tariff regulations exert powerful influences. Entire grain products are also probably the best bargain for thiamin, milk for riboflavin and green leafy vegetables for vitamin A. It is thus apparent that variety in food stuffs not only safeguards nutritional adequacy

but tends also toward economy in the cost of a truly adequate dietary.

One influence that is acting as a drag on improving the nutritional status of Canadians is the insistence on the part of many that dietary habits are nearly as unalterable as the laws of the Medes and Persians. How illogical such an attitude really is becomes evident when these same people express hearty approval of efforts to disseminate information concerning nutritional needs and methods for assuring these requirements. The fundamental basis of education in any field includes the assumption that habits can be modified by an appeal to intelligence. That our own dietary habits have changed radically is evident from a number of considerations. For instance the consumption of fresh fruits and vegetables has increased enormously in the last two decades. Not so good is it that during the same period a dangerously greater use of highly refined wheat and sugar has developed. Any advertizing concern could bear witness to the efficacy of appeal when adequately presented.

It seems strange that in a land where a great variety of food is available in great quantities malnutrition should be as extensive as surveys have proved to be the case. The solution of this problem lays a share of responsibility upon all who have to do with food.

Producers should be encouraged and enabled to raise the vegetable and animal foods necessary for adequate nutrition.

Methods of processing and distribution should conserve values.

Eating certainly should prove a pleasurable experience, and to provide adequate, satisfying meals day in day out, year in year out, demands intelligence, skill, artistic ability, understanding of people and plenty of hard work. This lays a heavy, but stimulating, burden upon those responsible for the planning, preparation and serving of the meals.

Another point all too easily overlooked by more fortunate groups is the inescapable fact that the money cost of adequate food can never be forced below an irre-

ducible minimum. This minimum will, of course, be determined by such factors as locality and season but it is futile, it is really adding insult to injury, to teach mothers what their children must have and at the same time prove that it is impossible for them to secure these essentials. This is to say that the community as a whole must assume responsibility for making it possible for every member to get enough food of the proper kind to provide all requirements.

Finally it is up to the eater to apply himself with good appetite and appreciation to the ample provision for nutritional needs afforded by the bounties of Canada. None of the food restrictions made ad-

visable by war conditions have lessened the adequacy of the supply and some have even enhanced its value.

In general it can be said the problem of nourishing people adequately never has been and never will be a simple one. The diets of most Canadians could be improved. At all stages from production to consumption it should be recognized that the first requirement of food is to supply the essential demands of the body. Some agency for coordinating the various interests would seem a logical development in the near future. Producers must be enabled to supply essential foods and these essentials must be made available to all.

Wings for a Railway

By D. B. WALLACE

EDITOR'S NOTE: In the Spring issue an article on the progress of Trans-Canada Air Lines written by Captain J. R. K. Main was published. This is now followed by a discussion of recent developments in Canada's second air line system, Canadian Pacific Air Lines. The author, D. B. Wallace, a native of the Maritimes and graduate of Acadia and Toronto Universities, is Special Representative of the Canadian Pacific Railway Company, Montreal, and Assistant to the general manager of the air lines. He recently was on loan to the Royal Air Force Ferry Command as Administration Manager.

CANADA, long mooted as the pivotal point in the world airline map of the future, moved a step closer to this goal when the Canadian Pacific recently acquired a widespread aerial network stretching throughout Canada and particularly in the north and northwest regions.

While certain observers have referred to the recent entrance of the Canadian Pacific into large scale air operations as a new phase of the Company's transport services, it is interesting to note that the railway secured a charter from the Dominion Parliament in March 1919, giving it the right to own and operate aircraft

within and without Canada; a fact that definitely focused the public eye at that time on the future possibilities of the civilian air industry. In 1930 the Company acquired an investment interest in the Canadian Airways, and in 1940-41 secured control of the ten lines listed below which now comprise its air system:

Arrow Airways Limited
 Canadian Airways Limited
 Dominion Skyways Limited
 Ginger Coote Airways Limited
 Mackenzie Air Service Limited
 Prairie Airways Limited
 Quebec Airways Limited
 Starratt Airways & Transportation Limited.
 Wings Limited
 Yukon Southern Air Transport Limited.

These lines can be classified as north-south feeder services connecting, in many cases, with the east-west main line trans-continental publicly owned Trans-Canada Air Lines. Because of the geographical location of the routes of the two railway-controlled air lines in Canada there is no competitive mileage or overlapping ser-