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DEPARTMENT OF
TRADE AND COMMERCE



A FACT A DAY ABOUT CANADA

FROM THE

DOMINION BUREAU OF STATISTICS

MAY 1941

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James Muir,

Editor.

from the

Dominion Bureau of Statistics

No. 213 -- Thurs. May 1, 1941-- More about Hens

Canada seems to have started a big campaign of supplying eggs to meet war demands, so a few notes on brooding and rearing may help the novice.

The time to have chicks arrive will depend on when it is wanted to have the pullets to start to lay. Early chicks are likely to mature more rapidly than those hatched in May or June. Six months should be allowed for Leghorns to mature and seven months for the heavy breeds. It is a mistaken idea that it is a good thing to have pullets commence laying at four months. Many difficulties with poultry are at least partly due to too early maturity. In order to retard development so that birds will not mature before six months, it is advisable to cut down the amount of protein in the mash by changing from chick starter to the growing mash at six weeks and by increasing the amount of scratch grain, so that the birds are getting all they can eat before going to roost.

Probably the greatest handicap for most birds is overcrowding. Crowding does one thing well -- produces culls. Every crowded chick has to work and continues to work all through life at a disadvantage. One hundred well-raised pullets may make a dollar each, while two hundred poorly-raised may cause loss of a dollar each. Sanitation is closely associated with crowding. It may seem like a lot of work to have the brooder house cleaned frequently and to place all feed and water dishes up off the floor on wire-covered frames, so that the chicks do not come in contact with the litter around these dishes, but results have shown that it is worth the effort. Everything that is done to improve conditions for the chick will be shown in the results obtained from the laying pen.

The next point to be considered is the range. This should be planned in advance so that a clean range, producing plenty of tender green feed will be available. It is suggested that the range is cut with the mower several times during the summer so that there will always be a supply of short tender grass for the chicks to eat. This tender green feed provides materials to strengthen the body and the bird is able to build up a reserve of energy to carry it over the hard winter months. Good stock, not forced, no crowding, sanitation and good range are the main points to remember for results in the laying pen.

No. 214 -- Fri. May 2, 1941 -- Reindeer Ranching

The main reindeer herd on the government reserve near the Mackenzie Delta came through the winter in excellent condition. During the latter part of March the deer made their usual migration from the inland winter range to the coast area, and are now on the fawning grounds on Richards Island, a short distance from the mainland. A preliminary report made in April on the fawning showed that 400 fawns had been born. Reports and round-up returns for the two herds under native management in the vicinity of the Anderson and Horton Rivers are expected later in the year.

Steps are being taken to extend the benefits of the reindeer industry to the natives living along the coast east of the reserve. Young Eskimos from Coppermine and other points are being encouraged to secure training either on the reserve or with native herds so that upon proving their ability they may be entrusted with several hundred deer. In this manner the foundation is being laid for an industry which is intended to augment the ordinary means of livelihood of the native population and there-

by improve their standard of living and conserve the game resources on which they depend.

An important advance in the training of natives was made this spring in the promotion of three apprentices to positions as qualified herders at the reindeer station. These men have now greater responsibilities in the handling of the deer and will assist in the training of other Eskimos who join the reindeer service as apprentices. Thus in a few years by application to their duties these natives, under the direction of the supervisory officers, have become accomplished in reindeer work and can pass on their knowledge to other Eskimos. One of these trained men has been selected to take part in the establishment of a new reindeer herd this year.

No. 215 --- ~~Sat.~~ May 3, 1941 --- Unusual Fish

Add this marine power station to your list of unusual fishes sometimes found in Canadian waters: From Vancouver comes the report of several specimens of the "electric ray" or "torpedo" being taken during the past winter in catches landed by herring seiners off the west coast of Vancouver Island.

This is the fish--*Tetranarce californica* to the scientists--which has back of its head a series of electric cells capable, as one authority puts it, of a combined output of electricity sufficient to knock a man down should he accidentally step on one of the rays as it lies partly buried in the sand. "This 'shocking' mechanism," to quote a Canadian fisheries scientist, "is no doubt a protective device but it may also provide the ray with part of its food."

This species of ray has a known range from northern California to Nootka, B. C. So far as present information shows, it is not abundant in the Canadian portion of its range but that is no matter since it is of no particular value and British Columbia has a wealth of fine food fishes. Closely related to the sharks, the different groups of rays are edible but, except for the skate group, are not ordinarily used for food purposes, not in this part of the world at least.

One of the electric rays caught by the herring seiners last winter measured a trifle more than 25 inches from its snout to the tip of the tail and 18 inches across the disc-like body. In colouring these fish, usually range in shade from dark gray to dark brown, and sometimes they are marked with small round black spots. The body, exclusive of the tail, is an "almost circular disc, the tail stout with well-developed fin, and the skin smooth without spines or prickles."

Closely akin to the sharks, as already pointed out, the electric rays give birth to their young alive, as do many sharks. On the other hand, their "in-laws," the fish of the skate group, deposit their eggs on the sea bottom where hatching takes place.

No. 216 --- Sun. May 4, 1941 --- More Men Wanted

Great Britain is at war! Canada is at war! The whole world is spinning round in a maelstrom of strategy, intrigue, and woeful, wanton slaughter. The vast potential power of freely thinking, freely acting, "civilized" peoples of the universe is being brought into line to resist the onslaught of hordes of barbaric robots that threaten the world with slavery.

Canadians must act and act now! An urgent call has gone forth for 32,000 men to swell the ranks of the Fourth Division and fill vacancies in the Third. Although men are needed in every branch of the Service, recruits are mainly desired for artillery, armoured units, engineers, ordnance and other technical branches of the army. Mechanical training will be of great assistance, but is not necessary, as the Army Trade Schools provide excellent training along the lines required.

Statistics show there are enough men available for Navy, Army and Air Force without impairing necessary industrial production. In the case of key men in essential war industries enlisting, employers will have the right to apply to a Board which may advise leave from the army for an appropriate period, if the employee so desires.

What constitutes a "key man" and a "war industry"? The former covers any man employed in a war industry whose occupation may not be interrupted without causing serious loss of effectiveness in his employer's activity. Any activity essential to the successful prosecution of the war is considered a "war industry." Application of these terms is left to authority of National War Services Board of each Administrative Division under the National Resources Mobilization Act.

In many cases women are taking the place of men in the factories, in business houses and even in the Fighting Services, thus freeing able-bodied men for active service.

Over 1,200 members of the medical profession have volunteered and been accepted for service since the outbreak of war. It is anticipated that another 140 for home duty and 210 for overseas will be required during the next twelve months.

The need for physically fit recruits is great, and veterans are asked to do their part in encouraging and stimulating enlistment. Col. Ralston, our Minister of National Defence, in a recent address to the young men of Canada said: "With all the power of the sincerity that is in my heart I ask those of you who are able to answer the call of your country . . . the freedom of the people of Canada as well as the freedom of the world is in the balance."

No. 217 — Mon. May 5, 1941 — Art Courses at Banff

This summer the Banff School of Fine Arts will again bring men and women from all over the continent to the Canadian Rockies, where they will spend four weeks in intensive study in the fields of art, music, or drama, under the guidance of distinguished instructors. During the past eight years the art courses at Banff have been attended by almost 1,400 students, who combined a holiday in this popular mountain playground with active participation in the practice of the art that appealed most to them.

Last year the Banff School of Fine Arts was held in the new and attractive auditorium of native stone and timber. A theatre, equipped with the finest staging equipment; rehearsal rooms; a music room, and an art studio are provided in the auditorium. The new building adds immeasurably to the school's efficiency as a centre for the development of the arts. The Banff school is conducted by the Department of Extension, University of Alberta, and certificates attesting to the work done are given to aid the students in the pursuance of their work in the commercial field. The curriculum includes classes in sketching and painting, in piano, choral singing, and in all branches of the theatre—acting, directing, staging methods, and play-writing. Concerts, exhibitions of new pictures, and the production of professional and student-written plays mark the close of the summer term.

Attendance at the Banff School of Fine Arts also provides the students with excellent opportunities for recreation in the park. Golfing on a course unsurpassed in Canada, swimming in the great pools which are fed by hot mineral springs in the heart of the mountains, canoeing on the Bow River where the quiet is disturbed only by the sudden explosive protest of a beaver who has been annoyed--these are some of the sports awaiting the student-vacationist and the holiday-seeker. Some of the more-actively inclined may prefer to climb the magnificent peaks which reach skyward on every hand, or to ride or hike far into the interior of the ranges. Others may enjoy sight-seeing trips by motor through the wild beauty of the Yoho Valley or to Lake Louise. Tennis, dancing, fishing in mountain lakes, or just loafing in the sun, all take on added charm and benefit in Banff.

No. 218 --- Tues. May 6, 1941 --- Growing Hops

Increased interest in the growing of hops has been general since 1930 in Eastern Canada and British Columbia, the two principal districts in which they are grown in Canada. However, the Canadian output has never been sufficient to meet the needs of the country and the deficiency has been supplied by Great Britain, Continental Europe, and the United States, over 60 per cent of the imports coming from Europe.

The hop vine is a perennial climbing herb. The hops are the soft greenish cones which are one or two inches in length, composed of thin leaf-like scales having a bitter taste and a heavy narcotic odour. Cultivation of the hop for brewing dates back in Europe to the Middle Ages but the industry was not known in England until 1524 when it was introduced from Flanders. In medicine the hop products are regarded as moderately narcotic. The freshly dried cones made into a pillow are useful for procuring sleep by inhalation of the aroma. It also finds a use for fermentations and poultices.

In general, hops do well on a fairly wide range of soil types. It is essential that the land be well drained and fertile. In Eastern Canada the greater part of the area planted to hops is sandy loam soil of medium to good fertility. This soil type is usually better drained than the heavier soils and is therefore much more suitable for hop production.

As a rule, hops can be grown where the soil type is suitable and harvesting is possible during the latter part of August and early September. Under moderate climatic conditions, such as are found in the hop districts of British Columbia, hops can be grown on somewhat heavier soils, but in Eastern Canada it is imperative the crop be grown on well-drained sandy loam to avoid the heavy losses occasioned by heaving by frost and the subsequent winter killing of the roots. Even when grown on light soils, some winter killing does occur, but, with adequate snow cover, which is normally the case in Eastern Canada, the damage is usually slight.

No. 219 --- Wed. May 7, 1941 --- Australia in Freedom's Cause

"So long as these dominions stand, Great Britain shall not fall." -- Prime Minister Menzies of Australia, Canadian House of Commons, May 7, 1941.

More than half a million of Australia's 7,000,000 inhabitants are engaged directly in war activity -- in the three arms of the fighting service, in the separate home defence army, on the industrial front. This number takes no account of the thousands of unpaid men, women and children who give up hours of their leisure to

help Australia's war effort.

Less than a fortnight after Australia declared war on Germany, the Prime Minister of Australia announced the Government's decision to raise a special force of 20,000 for service either in Australia or overseas. Thus was the A.I.F. born again, and it proved a worthy heir to the original A.I.F. which became Australia's national tradition.

By November, 1939, a division had been enlisted. It sailed for Palestine in January, 1940. Subsequently, the Government decided to build the A.I.F. to complete Army Corps strength and to provide for its unlimited reinforcement. Three more divisions and corps troops have been raised. An Armored Division has been organized.

In the short space of 18 months, the A.I.F. grew to a modern army of more than 100,000 soldiers. Australian soldiers have already achieved fame in Libya and Greece.

Australia now has an army of four divisions, plus corps troops, on active service.

Australia plans to spend £200,000,000 on her war effort this year.

Soon after the first British victories in Libya, the Australian Government decided to form an Australian Armored Corps to cost millions of pounds. The first step was formation of an A.I.F. Armored Division. This will include skilled personnel numbering 10,000 officers and men, between 500 and 600 medium and light tanks and more than 1,000 other armored vehicles.

All existing armored units in the A.I.F. and the Australian military forces have been embodied in the new corps. An armored training centre has been established for the training of officers and men.

The Australian Air Force is the baby of the fighting services -- but only in years. At the beginning of 1940, 268 recruits had been accepted as air crews and 2,421 as ground staff. At the end of 1940, 12,576 air crew personnel and 25,276 ground staff had been interviewed and accepted -- a total increase of 35,163. During the 58 weeks to February 21, 1941, more than 160,000 men had applied. This total is equal to one application every three and a half minutes, night and day.

Australia is one of the four partners in the Commonwealth Air Training Plan. Her task is to provide over 20 per cent of the required personnel. She is well ahead of schedule. Australian airmen are training in Canada under the Plan.

The personnel of the Australian Navy is more than three times as great as it was in August, 1939. Recruiting is proceeding at the rate of 5,000 men a year.

Work of building 40 patrol vessels, three Tribal destroyers and a number of other auxiliary craft is progressing rapidly.

Compulsory military training for home defence came into operation in January, 1940. At the end of February, Australia's home forces amounted to about 210,000 exclusive of the latest draft of compulsory trainees.

Since the war began, Australia has stepped up her industrial war effort twenty-fold. Nearly 150,000 Australians are employed directly and indirectly in turning out munitions of war, fighting vehicles, war planes, army material ranging from minor items of equipment to huge mobile field units, developing medical

supplies formerly imported from the Old World, building ships.

No. 220 -- Thur. May 8, 1941 -- Whalers Put to Sea

Out on the British Columbia coast the whaling ships have put to sea again. Not the square rigged ships of olden days but powerful steel whaling tugs armed with harpoon guns and fitted for whaling in the modern manner. The whaling season opened on April 1st and will continue for about four months. Whalers operate under licence granted by the Dominion Department of Fisheries and this year six licences were taken out.

Whales are utilized in the manufacture of meal, oil and fertilizer, but oil is the chief product of the Canadian whaling industry, which, by the way, is entirely a British Columbia industry. Under ordinary conditions whaling products are in the main exported to the United Kingdom and the United States.

In 1939, due to unfavourable market conditions, no whaling was carried on from Canadian ports but more favourable conditions prevailed in 1940 and the whalers went out again. In that year British Columbia whalers operating from two stations landed a total of 219 whales which produced over 361,000 gallons of oil, 181 tons of meal, and 434 tons of fertilizer.

Six species of whales are taken in operations in the Pacific with sperms and finbacks most plentiful. Some sulphur, humpback, bottlenose and sei whales are also taken, though in last year's operations none of the latter two species was captured. The sulphurs are the biggest of all the whales taken in Canadian operations and an 83-footer of this variety headed the list in 1940.

Altogether, 186 male and 33 female whales were taken last year. Divided according to species, the captures showed, sperms, 126, finbacks, 89, sulphurs, 2, and humpbacks, 2.

No. 221 -- Fri. May 9, 1941 -- Cape Breton Highlands

Bagpipes and the kilt will feature the formal opening of Cape Breton Highlands National Park, scheduled to take place on Dominion Day, July 1, at North Ingonish, Cape Breton, N. S. Hon. T.A. Crerar, Dominion Minister of Mines and Resources; Hon. A.S. MacMillan, Premier of Nova Scotia, and other Dominion and Provincial Ministers and officials are expected to take part in the opening ceremonies.

Established in 1936, Cape Breton Highlands National Park embodies a rugged and mountainous area of 390 square miles in the northern part of Cape Breton Island. Development work carried out so far includes the improvement of the Cabot Trail, which encircles the park and provides a safe and comfortable motor highway; construction of an 18-hole golf links, and the provision of administration buildings, bath-houses, tennis courts, and other recreational facilities. In addition, the Government of Nova Scotia has provided excellent facilities for travellers in Keltic Lodge.

The hills and valleys of the park bear striking resemblance to the Scottish Highlands, and in picturesque villages outside the park live many families of Highland Scottish ancestry who have retained the traditions of their hardy forefathers. Here the Gaelic is spoken, and the custom of the "ceilidh" and "mod" is still preserved.

Port Royal National Historic Park, on the original site of the Port Royal Habitation built in 1605 by Champlain and De Monts, will also be officially opened on July 4. Here on the shore of Annapolis Basin has been erected a replica of the group of buildings, which sheltered the first settlers in Canada and formed the first permanent trading settlement in North America north of the Spanish settlement on the Gulf of Mexico. This unique historic park forms a link with many other "first events" in Canadian History, and adds immeasurably to the historic attractions of Nova Scotia.

No. 222 -- Sat. May 10, 1941 -- Bee Diseases

Bees, like all other living creatures, are subject to diseases but fortunately those affecting bees do not attack either animal or man. They do, however, create a serious problem for the beekeeper. Bee diseases are divided into two groups: those affecting adult bees and those affecting the brood. There are no serious adult bee diseases in Canada but an occasional colony may be found suffering from paralysis but such colonies seldom die outright, nor does the disease appear to spread to other colonies. Changing the queen of the colony usually effects a cure. Dysentery, so common among bees during the spring, is not a disease but the result of long confinement to the hives. The first good flights in spring relieve the condition. The brood diseases are more serious although European foul brood and Sacbrood may easily be kept under control by good beekeeping practice. American foul brood, however, is feared by all beekeepers for once a colony becomes infected it is doomed and until destroyed is a menace to all other colonies within flying distance of it.

Although the Department of Agriculture of each province does its utmost to help the beekeepers control American foul brood, it is imperative that each beekeeper co-operate by learning the symptoms of this disease and act as his own inspector. To distinguish disease one must first know the appearance of healthy brood. Uncapped larvae, when healthy, are pearly white in colour and lie, curled up, at the base of the cell while the cappings over sealed brood are slightly convex and of the same colour as the surrounding comb. Discoloured larvae, dark coloured, sunken or perforated cappings must be regarded with suspicion. Brood dead of American foul brood turns dark brown in colour and sinks to the lower wall of the cell and is usually accompanied by a disagreeable odour. If a splinter of wood is inserted into the dead larva and then slowly withdrawn part of the mass will adhere to the splinter and draw out in fine threads. If one is at all doubtful as to the disease present a small sample should be sent to the provincial apiarist or to the Bee Division, Central Experimental Farm, Ottawa, for diagnosis. This service is free. As apiary inspection and disease control is under the jurisdiction of the provincial departments every beekeeper is advised to write these departments for a copy of the act covering this work.

No. 223 -- Sun. May 11, 1941 -- Klondike Memorial

Early Klondike days in the Canadian Yukon are recalled by Canada's most northerly historic site, a bronze tablet at the entrance to the Administration Building in Dawson City, Yukon. Erected some years ago by the Department of Mines and Resources on the advice of the Historic Sites and Monuments Board of Canada, this memorial tablet pays perpetual tribute to the memory of the hardy pioneers whose determination and courage gave vast riches to the world.

Braving extreme dangers and untold hardships, those indomitable prospectors and miners ventured through the Chilkat and Chilkoot passes into the unexplored valley of the Yukon to pave the way for the discovery of the rich gold

fields with which the names of Robert Henderson and George W. Carmack are inseparably associated. For many years gold had been prospected for in the Yukon, but none of the discoveries created any great excitement until the rich find was made on Bonanza Creek on August 17, 1896. Had this lucky strike not been made it is possible that the treasures of Bonanza, Eldorado, Hunker, Dominion, Gold River, and many others might still lie hidden away in the bedrock and gravel covered by the heavy forests that grew in the valleys.

After almost half a century the Yukon continues to be an important producer of gold, but the pan, rocker and sluicing methods of the early Klondike miners have been replaced by huge hydro-electric power dredges. Although many of the hardy Yukon pioneers have passed on, each year their dwindling ranks parade to celebrate Discovery Day, when stirring tales of long ago are again retold.

No. 224 — Mon. May 12, 1941 — Canada At War

On third reading of the \$1,300 million war appropriation Bill, Prime Minister Mackenzie King outlined to the House of Commons what Canada has done in 18 months of war. Here are some points:

In the Army, Navy and Air Force together, Canada has a quarter of a million men on active service. This does not include 175,000 in the army reserve.

A Canadian army corps, Canadian destroyers and Canadian air squadrons sharing in the defence of Britain.

Canada's navy and air force doing their part to keep open vital sea lanes of the North Atlantic.

Canadian garrisons on guard in Iceland, Newfoundland and the West Indies.

Canadian engineers strengthening the defences of Gibraltar.

Canadian navy which had only 15 ships at the outbreak of war now has over 120.

Nearly 60 military training camps distributed across the country.

Under British Commonwealth Air Training Plan, some 90 establishments already in operation.

Canada's outright contribution as a belligerent is paid for in full by the Canadian people. It is not leased to Britain. This contribution is estimated to cost the Canadian people \$1,450 millions in the coming fiscal year.

In addition to her own war effort, Canada is a major source of supply for Great Britain.

Since war began, British and Canadian governments have undertaken capital advances of over \$380,000,000 for the expansion and equipment of Canadian industry. Expansion of production in Canada has already been reflected in the absorption of between 330,000 and 350,000 additional men in industrial employment.

Over and above direct war effort, Canada expects to send \$1,500 million worth of munitions of war, raw materials and agricultural products to Britain during

the next twelve months.

In the fiscal year beginning April 1, Britain's deficit in her balance of payments with Canada is estimated at \$1,150 million.

Canada must provide Britain with Canadian dollars to meet this deficit either by purchasing Canadian securities now held in Britain or by accumulating sterling balances.

From September 15, 1939, to the end of February 1941, United Kingdom's deficit with Canada amounted to approximately \$737 millions. Of this deficit, Canada provided 45 per cent by repatriation of securities, 21 per cent by accumulating sterling balances in London and only 34 per cent by transfer of gold.

During the six months' period ended February 28 last, Britain's deficit with Canada was \$359 million. Canada financed the whole of that deficit except \$65,000,000 covered by gold shipments.

Since early part of December, no gold received from Great Britain.

Taking national income of United States at \$80,000 million, Canada's estimated war expenditure, direct and indirect in 1941-42 equivalent to an expenditure by the United States, in a single year, of almost \$35,000 million.

Canada's financial assistance to Great Britain in fiscal year 1941-42 equivalent, in comparable American terms, to something over \$15,000 million a year.

In terms of United States population, 250,000 Canadians on active service are equivalent to an armed strength in the United States of over 2,750,000 men. This does not include Canada's reserve army for home defence.

No. 225 --- Tues. May 13, 1941.--- Rural Canada is Helping

Rural Canada is not playing second fiddle to urban Canada in the great National Salvage Campaign. Not by any means. Rural Canada is making a very notable contribution to this aspect of the war effort. Farm, and country town homes are pouring a steady stream of reclaimed raw materials into the war industries.

For instance, statistics accumulated to date show striking activity in the collection of secondary textiles, or old rags, and old bones. The salvaging of rags is somewhat complex. They have to be carefully sorted. The salvaging of old bones is more simple. In both cases the country town and rural local salvage committees across Canada are doing heroic work.

Woollens undergo a salvage transformation that is hard to believe. After this type of rag reaches industry the transformation begins. They are thoroughly cleaned, sterilized, and then shredded. The shredded material is next mixed with live wool. And the combination is woven into several kinds of heavy cloth which makes blankets and uniforms.

Collecting wool rags and turning them back into industry is definitely a direct contribution to the war effort by the rural salvage committees.

Collecting cotton rags is no less so. White or colored, they find their way finally to factories which make "waste" into machinery wipers. That old house dress you contributed to the salvage campaign in your district may at this very moment be

wiping the oil and grease from a lathe that is turning out a bomb to be dropped on Berlin!

Other types of secondary textiles are interesting the National Salvage Office. Linens, for example, are being turned back into industry to make the fine grade of paper needed for important military and state documents. Country towns salvage groups are co-operating in increasing the supply of this.

Jute sacks are still another type of secondary textile having salvage value. Owing to the slow delivery of jute from India and the problem of getting shipping space, there has been difficulty in supplying the needs of the Canadian market with new bags. As a result, second hand jute bags have appreciable value. They are being disposed of locally by rural salvage groups collecting them.

The salvage of bones in rural and country town Canada is, of course, not as easy as the salvage of rags, except in those municipalities within trucking distance of large centers. But the great need for bones for Canadian war industry, in the explosive and adhesive departments, prompts all possible efforts at salvage in this direction.

Canada has many munitions factories; and sandpaper, made by glue concerns, is an essential commodity in the manufacture of airplanes. Maintaining a continuous supply of bones for these enterprises is to assist materially in supporting Canada's fighting men. Country town housewives who save bones are contributing directly to winning the war. Rural voluntary salvage groups that gather bones from farms also contribute, since even sun-bleached and wind-dried bones have value.

Canada from coast to coast is singing that old song ---"Any rags, and bones?" --- with new zest and emphasis. Rags and bones are war materials, and the collecting of them for war purposes is doing a war job of real importance.

No. 226 -- Wed. May 14, 1941 -- Shelter Belts

In the ordinary sequence of events in the general protection of prairie farms, the establishment of tree belts is a first consideration, particularly of those made sufficiently roomy to avoid cramped quarters for garden and fruit plots, for shelter is an absolute necessity in successful horticulture under prairie conditions. The percentage as yet of prairie farmers growing fruits is comparatively small. Reports recently received from 2,869 farmers possessing fairly well developed tree belts show that 97 per cent have good vegetable gardens, 41.2 per cent are growing small fruits, and 24.5 per cent tree fruits. However, a large number of farms are still without shelter and consequently there is little attempt at growing fruit.

It has been fully demonstrated that fruit of some kind can be grown anywhere on the prairies where conditions are suitable for grain farming. Farmers at widely scattered points have made outstanding successes with fruit and their accomplishments are stimulating others. Where a choice of location for fruit growing is available, a northerly or easterly slope is generally conceded to be the most favourable, but the average farmer need not hesitate because he has not an ideal site. The main thing is adequate protection which has to be developed by shelter belts.

Factors in selecting the site are--convenience to buildings, taking advantage of natural contours so as to utilize as far as possible the natural spring run-off from melting snow collected by the shelter belts, and proximity to the farm dugout so that surplus water may be made available for irrigation. Shelter should be made on all

four sides because severe storms may come from any point of the compass. The main belt should consist of at least three to five rows of trees, with the inside row at least 20 feet from the nearest fruit trees or garden crops. Hardy evergreens give the best shelter. Broadleaf varieties, such as caragana, boxelder, elm, and ash develop more quickly and afford good protection in from four to six years. Where possible, evergreens should be planted to supplement the main belt and will increase in effectiveness as the years go by.

No. 227 -- Thurs. May 15, 1941 -- Those Spoilt Holidays

Many a summer outing or a pleasant week-end afternoon in the garden is spoiled by mosquitoes. While not ensuring complete control, measures may be taken to give at least some protection for short periods in limited areas. A spray for this purpose is mentioned by C.R. Twinn, of the Government's Division of Entomology, in a publication on "Mosquito Control in Canada". The spray may be prepared by thoroughly emulsifying one gallon of kerosene containing the extract of one pound of pyrethrum powder (a standard pyrethrum fly spray would do) with one-half gallon of water in which four ounces of liquid soap (40 per cent) have been dissolved.

This concentrated emulsion, after being well shaken until thoroughly mixed, should be diluted with 10 parts of water and sprayed as a fine mist on lawns, shrubs, and other vegetation, by means of a pressure sprayer with a suitable nozzle, using about 55 gallons of spray per acre. The application should be made about half an hour before the picnic or the meeting takes place.

This spray may also be substituted for petroleum oil in treating ponds and other water bodies to kill mosquito larvae and pupae, using about 50 gallons to the acre of water surface.

However, in mosquito control, although individuals on their own property may assist greatly by preventing mosquitoes from breeding, best results are obtained only when the work of control is organized on a community scale, either by public-spirited citizens or by municipal or other authorities, and is carried out under competent direction and with adequate funds.

No. 228 -- Fri. May 16, 1941 -- Poultry Range Management

Too much emphasis cannot be laid upon egg and poultry development; for under war-time conditions the keeping of poultry and in particular the production of eggs for shipment to Britain is becoming increasingly important.

The stock that is to produce these eggs for fall and winter supplies is at present the immature pullets now on range. To a large extent the success to be achieved during the next several months depends on the conditions prevailing through the rearing period.

Problems of range management arise from three main sources: Selection, feeding and housing. Selection or culling of birds on range should be started at an early age and continued throughout the summer. By such selection the weak and poorly constituted birds are weeded out. As these birds are the ones most susceptible to disease and indeed are often carriers the possibility of large scale outbreaks of disease is greatly reduced. Many poultrymen cull continuously by watching their flock and removing the poor ones daily while doing the chores. Others cull at regular monthly or bi-

monthly intervals.

Feeding methods on range are similar to those of other periods in the birds' development. Much labour is saved and more uniform growth is secured if large field hoppers are provided so that the birds may eat at any time. The feeds required during the rearing period differ somewhat from those of brooding or laying. Cheaper feeds can be used on range because the protein requirements are not so great and also because the chicks are not confined and have a plentiful supply of green feed as well as an abundance of direct sunshine. When such conditions prevail the meat meal or concentrate in the ration can be materially reduced and the cod liver oil entirely eliminated. Rations for the rearing period may be made up from the coarser and less expensive feed ingredients. Scratch grains are introduced gradually when the chicks are six to eight weeks of age and slowly increased in amount until the birds are eating approximately twice as much whole and cracked grains as mash. High calcium limestone grit or ground oyster shell should be hopper-fed and available to the birds at all times. This ensures a plentiful supply of calcium for bone formation and helps avoid gizzard impaction and other digestive troubles. Clean water is essential for chickens on range. Water fountains should be scoured out and refilled with fresh water every morning. It is a good plan to boil or otherwise disinfect all watering equipment at least once a week, particularly during the hot weather.

Housing on range should be done in the most inexpensive type of buildings available. The most important consideration in range accomodation is to provide a dry, well ventilated house free from draughts. Portable colony houses meet these requirements. Range shelters are used to supplement colony houses and in general it is range shelters that house the range cockerels. Separation of the sexes at an early age gives the pullets more hopper and roosting space, promoting uniform growth and maturity. In providing adequate roosting space for birds on range the recommendations are to allow 35 linear feet for each 100 chicks up to the age of four months. After that age allow 50 linear feet for the same number of birds.

To raise healthy chicks free from worms and other parasites it is necessary to rear them on clean well drained land. This means setting up the range houses at some distance from the other buildings on the farm, preferably near an orchard or other sheltered spot. Providing plenty of shade for growing chicks is an almost indispensable part of successful range management. Where trees cannot be utilized, sunflowers or corn should be planted so that the birds may have easy access to the shade thus provided. For winter eggs, cull vigorously, feed well and house properly, during the rearing period on range.

No. 229 -- Sat. May 17, 1941 -- Lobster Meat

Rated high as a sea food delicacy, and consequently sought in increasing amounts, especially by hotel and restaurant operators, cooked, shelled, lobster meat is playing an increasing part in Canada's lobster markets. Because of the perishable nature of this fresh or "shelled" lobster meat, producers necessarily have to employ scrupulous care in its preparation for market, and federal regulations carefully govern the conditions under which the meat may be prepared and packed for shipment.

No plants producing lobster meat may operate except under permits from the Dominion Department of Fisheries and the plants themselves are subject to frequent inspection by authorized inspecting officers. In the production of lobster meat lobsters from Canada's Atlantic coast--the fishery incidentally is the greatest lobster fishery in the world, shared in by over 18,000 fishermen--are cooked by

steaming or boiling in the same manner as in lobster canning operations. Only meat from the claws and tail is used. It is carefully washed after removal from the tail and then packed in enamel lined cans, usually 14 ounces of meat to the can. A small amount of pickle is added in packing. Covers of the push-cover or screw top type are used on the cans.

At all times after cooking the meat is handled at the lowest possible temperature above freezing. After it has been placed in the covered cans, the tins are pre-cooled in crushed ice so as to bring their temperature down near the freezing point as soon as possible. They are then held in a cold room until ready for shipment by fast transit to point of delivery.

The cans are usually shipped in small barrels, about three dozen cans to a barrel, surrounded on all sides by crushed ice. They are packed inside a three sided slat framework with crushed ice between the slats and sides of the barrel as well as on the bottom and top. Usually covered with burlap, the barrels may be re-iced during transit in warm weather or on long trips, thus further ensuring protection of the quality of the goods.

Speed in packing and shipping is essential in the lobster meat business and the live lobsters utilized are not cooked until there is just enough time to pack and chill the meat and fill the barrels, before departure of the boat or train on which shipment is made.

Although there is growth in the lobster meat business, by far the greater part of Canada's annual catch of more than 31,000,000 pounds of lobsters is used by the plants putting up canned lobster and by dealers in live lobsters or lobsters shipped in the shell. Most of the live lobster business is done with the United States. In pre-war days much the greater part of the canned lobster production was marketed in Great Britain and some parts of continental Europe, but at present it must find outlet instead in Canada and the United States.

No. 230 -- Sun. May 18, 1941 -- Fire Effect on White Pine

Disastrous forest fires have occurred this spring, and the National Research Council looks upon the effect of these fires on white pine succession very seriously.

The three coniferous species with whose future Canada is chiefly concerned are Douglas fir in British Columbia, white pine in Ontario and western Quebec, and spruce in Quebec and the Maritime Provinces. Each of these species has its own reproduction problems; each demands special investigation. Of these problems, succession of white pine on burned-over lands was selected for first attention.

A special report contains material secured in a survey through 1939-40 of white pine cover-types in the Ottawa Valley region. It was the purpose of this survey to study present conditions of regeneration on cut-over and burned-over stands, to chart the probable succession of vegetation, determine the significance of fire and other factors influencing pine regeneration, and from this information to deduce improvements in management methods.

Previous regeneration surveys were analyzed before field work was undertaken. Seven widely distributed areas on both sides of the Ottawa River were examined. Data on fire history, soil conditions, herbaceous, shrub and tree vegetation and tree growth were recorded. It was found that (a) white pine regeneration on

cut-over and burned-over lands is generally insufficient for future requirements; (b) white pine in tolerant hardwood cover-type is no longer significant; (c) an insufficient number of seed trees remains after cutting, and the maximum number of seedlings is not greater than double the number of the stand present prior to cutting, which is considered inadequate; (d) burning in stands of mature timber stimulates regeneration, but results of fire in young stands are still doubtful and additional data are required in this connection.

While further work in this field has had to be discontinued because of the war, it is hoped to renew the study as soon as possible and to make a further examination of the relations between seed supply, seed year and the resulting regeneration on burned and unburned soils. The number of seedlings required to provide a final crop worth harvesting also needs further study and for this and related work a set of permanent sample plots located in commercially logged-over limits, in addition to those already established in managed stands, appears to be essential.

No. 231 -- Mon. May 19, 1941 -- Corvette to be Named after Chambly

Announcement that one of the new corvettes of the Royal Canadian Navy is to be called the "Chambly" awakens new interest in Fort Chambly National Historic Park, twenty miles south-west of Montreal, on the Richelieu River.

The history of Fort Chambly goes back more than two and a half centuries to the days when the French built a chain of forts along the Richelieu to protect the colonists from the marauding Iroquois, whose depredations made it unsafe for men to attempt to work in the fields or forests. The first Fort Chambly, built in 1665, was of wood construction, 140 feet square with palisades 15 feet high. Inside the walls were barracks for the soldiers, a chapel, and a house where the commandant, Jacques de Chambly, lodged and had his office. The fort served as a refuge for the settlers during Indian raids until 1702, when it was temporarily abandoned by the military authorities and the Indians seized the opportunity to commit it to flames.

It was rebuilt on a smaller scale, and in 1709 representations were made to France urging the necessity of a stone fortress on the site. While waiting three years for the approval of the French Government at Versailles, the impatient colonists, with the aid of the militia, built the massive structure, the ruined walls of which still stand. In 1760 the fort was surrendered to the English, when Montreal capitulated. It was held by the British until 1775, when American troops under General Montgomery captured it. They evacuated in 1776, burning everything which was combustible and leaving only the four walls standing.

In 1777 the fort was repaired and garrisoned by Governor Carleton. During the War of 1812-14 it was used as a base of operations, and at the end of hostilities served as a resting place for the soldiers of the regiment of the Duke of Wellington on their return from Spain. It was completely abandoned as a military post in 1851.

Recently designated a national historic park, the ruins of old Fort Chambly stand as a shrine to the memory of those gallant souls who "have enriched with their blood the soil where germinated the civilization of the new world." Three walls of the fort still remain, and there is a museum containing interesting relics of the region together with examples of French-Canadian art and handicraft. Along the south wall the ruins of two great fire-places have been identified as the only remains of the chapel, hospital and chaplain's house.

Within the northeast bastion may be seen the magazine or storehouse, still in fair condition, with vaults and cells. In the northwest bastion is found the old "donjon", distinguishable by its arched masonry. The flagstaff of the fort has borne in turn the Lilies of France, the Union Jack of Britain, the Stars and Stripes of the United States, and now for a century and a half the flag of the British Empire. Rich in historical memories, Fort Chambly today presents a romantic rendezvous for tourists.

No. 232 -- Tues. May 20, 1941 -- Plants in the Home

If new clay pots are used for growing plants in the home, they should be soaked in water for a time and dried before using. Old pots should be thoroughly scrubbed inside and out. Before filling the pots with soil, a few broken crocks should be placed over the drainage hole. Pots should not be larger than is necessary to hold the roots. It is better to start a plant in a small pot and then repot it into a larger one when the roots have filled the small one. When plants are in active growth, fertilizer may be given. The tablets sold under various trade names are the easiest to use on potted plants in the home.

The soil used in the pots should be fairly rich and porous so that water drains out of it easily. A compost made up of three parts good loam, 2 parts leaf mould, and one part sand, with about a tablespoonful of bone meal to a quart of mixed soil, will suit most plants. All should be thoroughly mixed and slightly moistened.

The chief difficulty encountered in growing plants in the home is the hot, dry atmosphere. This can be controlled to some extent by keeping dishes of water on the radiators and spraying the plant with a mist-like spray of water. The spraying helps to destroy insects, and, by keeping the foliage of the plants free from dust, encourages good growth. Light is another necessity. A window that has sunlight for several hours is required for most flowering plants, but ferns and other plants grown for their leaves will do well without sun. Fresh air is essential but draughts and sudden changes of temperature must be avoided.

No. 233 -- Wed. May 21, 1941 -- Process of Extermination

Sometimes it does not seem as if the Canadian people realized what is happening in those countries of Europe which the Nazis have occupied. We seem to avoid reading the harrowing tales. The Poles, for example, are being mercilessly exterminated by the Germans. Here is an official report which gives but ~~an~~ example of what is going on.

Nazis are driving panic-stricken Poles from their homes in Polish territories now incorporated in the German Reich. The deportations affected all districts, all classes of people. In the districts of Gostynin and Kutno small landowners have been expropriated, landless peasants driven out. Five hundred persons, Polish business men and merchants, were expropriated in Kutno in one night. Children were separated from their parents and taken into the Reich.

Throughout the most severe part of last winter, deportation from the Pomorze provinces of Lodz and Poznan continued. From the small district of Kosciany, 800 peasants were taken to the General Government in cattle trucks. Their journey to Zamosc lasted five weeks during which they received no cooked food and remained endless periods at wayside stations where 40 children died.

Out of one single transport of 1,200 Poles from the west to Piotrkow, 229 children died, besides several adults.

Only seventeen children survived the journey.

No. 234 --- Thurs. May 22, 1941 --- Our New Gold Area

Discoveries of gold which show promise of commercial importance are reported to have been made in the vicinity of Snare and Emile Rivers and Wray Lake in the Northwest Territories. Already a total of 500 claims ~~has~~ been staked in the new field which lies about 150 miles north of Yellowknife settlement, and preparations have been made for the carrying out of extensive exploratory and development work during the coming summer.

Mercury Gold Mines Limited is at present stripping the overburden from its showings at Emile River and is sampling, mapping, and diamond drilling the veins. Later the company will sink prospect shafts. A small mining plant is on its way to the property and a power site has been located **about** seven miles from the claims. Adjacent to the Mercury property are areas of greenstones which have not as yet been prospected, and thirty miles to the southeast, Frobisher Exploration Company has a group of claims on which it plans to carry out a program of diamond drilling. Interest in the discoveries is based largely on the hope that they will mark another important stage in the growth of mining in the Northwest Territories.

Prior to 1929 the principal mineral developments in the Northwest Territories were the location and partial development of lead-zinc deposits near Pine Point, Great Slave Lake, and the discovery of oil at a point about fifty miles below Norman on the Mackenzie River, where there are now three producing wells and a refinery. During that year deposits of copper were staked at Hunter Bay, Great Bear Lake, but it was the discovery in 1930 of the ores of radium and silver at Echo Bay on the east side of Great Bear Lake which provided the first real incentive to a search for minerals in the Territories.

A few years later gold was discovered in the Yellowknife River area. It was from the Con property in this area that the first gold brick produced in the Northwest Territories was poured in September, 1938. By the end of February, 1941, this mine and the Rycon and Negus mines in the same area had produced gold to a total value of more than \$4,500,000. Three other properties in the area are nearing the production stage.

In September, 1940, Slave Lake Gold Mines Limited resumed development of its claims on Outpost Island, and this property was brought into production early in 1941 when a mill with a daily capacity of 50 tons of ore was put in operation.

No. 235 --- Fri. May 23, 1941 --- Pelicans and Cormorants

An outstanding feature of a wild life survey conducted in Prince Albert National Park in Saskatchewan last summer was the observation of breeding colonies of white pelicans and double-crested cormorants in Lavallee Lake. This lake is in the northwestern extremity of the park, surrounded by virgin forest, and the birds occur on several islands, the two species in some instances amicably nesting together in the same area. As a rule they are so sociable that, regardless of the amount of space available, very crowded conditions prevail. The largest nesting colony is

composed of several thousand adults and juveniles of both species with the pelicans being greatly in the majority.

One of the showiest of the large birds of the continent, the white pelican is famous for the amount its beak can hold. It has a fascinating habit of flying in circles over a lake, and dropping down on the surface with its feet extended like two large pontoons. This bird nests over a wide geographic range. Breeding colonies which once occupied islands in prairie lakes and finally withdrew because of settlement, or drought, have taken up summer quarters on many lakes in the northern forest. Even before the advance of western civilization began, these species habitually nested at many points well north of the Great Plains. The most northern breeding locality recorded for the white pelicans is an island in the rapids of Slave River between Fitzgerald and Fort Smith in the Northwest Territories.

No. 236 -- Sat. May 24, 1941 -- Western Hemlock

Western hemlock, one of the large trees of British Columbia, is assuming a place of ever increasing importance in the lumber industry of Canada. The lumber from this species has occupied a difficult place in the past; it was produced along with Douglas fir--a wood of outstanding quality--and usually from areas which did not favour its best development. After manufacture it was offered for sale to markets accustomed to Douglas fir. The results were unsatisfactory and western hemlock lumber was largely ignored or was applied to minor uses.

Now that logging operations are opening up more areas where this valuable species is predominant, the importance of producing and marketing the lumber under conditions suited to its best utilization, and which will ensure a maximum of satisfactory use, has been recognized. The quality of lumber now cut has improved, and research has established manufacturing and seasoning practice designed to bring out the best in the wood. Western hemlock is becoming established in special fields of usefulness and is being recognized in the markets of the world as a distinct and important Canadian species.

No. 237 -- Sun. May 25, 1941 -- Colonies on the Job

Many things about the way the Colonies have lined up with the Dominions in the battle for freedom have not yet been told. The following are a few samples.

An East African Supplies Board, representing all British East African territories has been set up at Nairobi, Kenya.

The sisal industry in Kenya is turning out thousands of sandbags.

A Kenya factory is canning beef from Tanganyika at the rate of 20,000 cans a day. The beef is used to feed British forces in East Africa.

The British Government has purchased the whole of the cocoa crops in the Gold Coast and Nigeria. A West African Control Board is being set up to administer the scheme.

Plans are being made to develop shipyards at Lagos (Nigeria) and Freetown (Sierra Leone). The yards will undertake all normal repairs to ships.

Shipyards at Hong Kong are building naval craft for the Admiralty.

Over 5,000 volunteers from Cyprus are serving with the British Army, mostly with the Middle Eastern forces.

Recruiting of the first two contingents of Palestinian Jews for the Buffs (Royal East Kent Regiment) has been completed. They are the first Palestine fighting units of the British Army.

An Industrial Production Advisory Board has been formed to develop industry in Palestine for war-time conditions. The first steel foundry in the Near East has been started at Haifa. Other new enterprises include a diamond polishing factory and a factory producing rubber tubes.

No. 238 -- Mon. May 26, 1941 -- Fish Culture

Trout may be very smart fish but they don't know enough to follow the maxim, "once bitten, twice shy." Some of them don't, anyway.

Out of 475 trout recently taken by anglers in one Nova Scotia lake and its tributary streams 375, or close to 80 per cent, were fish which had previously each lost a fin at man's hands. They hadn't learned from earlier experience to keep out of man's way.

The story of these trout helps to indicate the measure of success achieved by the Dominion Department of Fisheries in maintaining fish stocks in waters where fisheries are under its administration. Here it is, in brief: Numbers of young trout from departmental hatcheries were freed in Sherbrooke Lake and its tributaries by the department's fish culture staff. Each little fish was marked by the removal of a certain fin so that it could be identified as having come from departmental distribution should it be recaptured after growing up. This year the sportsmen have been finding the fishing pretty fair in the Sherbrooke waters and, lo and behold, when their catches for the first ten days or so of the season were examined about four-fifths of the fish each lacked a fin. That showed, of course, that they had come from the departmental distribution, which, by the way, had not been especially heavy in that area.

One or two 1940 facts are of interest in the same connection. Angling catch from Sherbrooke waters last year included nearly 400 marked fish. In Coosue Coffre Lake one angler found 35 marked trout in a catch of 50. Another sportsman who landed 17 fish on a trip to Dobson's Lake found that 14 showed the tell-tale lack of normal number of fins. In Giant's Lake, where marked Rainbow trout were distributed from the department's Antigonish hatchery, about 37 per cent of the 1940 angling catch were from the fish culture distributions. As a matter of fact, the Rainbow catch wasn't very large but it would have been much smaller if it had not been for the departmental stocking.

No. 239 -- Tues. May 27, 1941 -- Poison Ivy

Poison ivy thrives in places beyond the reach of the plough. Just like many holiday makers, it prefers a locale least disturbed by man in sequestered nooks and rocky beauty spots. At the same time it may be found growing under a variety of conditions, wet or dry, shaded or open, in all soils from pure sand to stony ground, and along fence borders in cultivated land. It has many guises. It may appear as a low shrubby patch, or as a more or less continuous border, or as a cluster like the Virginia creeper. Commonly it is of low bush growth, and it can best be identified

by the formation of its leaves which are arranged in threes after the manner of the strawberry. Unlike strawberry leaves, those of poison ivy are quite smooth and firm or leathery, with the edges sparingly course-toothed. In that respect, the leaves are somewhat like those of the Virginia creeper, which, however, are arranged in fives.

The active element of poison ivy is poisonous throughout, and the breaking or bruising of any part of the plant liberates the oil in it to come in contact with the exposed skin of the person touching it.

In mild cases of itching as a result of the poison, immediate scrubbing with strong laundry soap will effect a cure, if used before the oil has penetrated the skin and blisters begin to appear. Treatments without number have been proposed and used, but the treatment most widely recommended is to daub the affected parts with a three per cent solution of potassium permanganate. The stain left by the potassium will disappear after a time or may be removed slowly by soap and water. Tincture of iodine has also been found useful but it stains more than the potassium. Once blisters have been formed, all rubbing should be avoided.

When the attack is severe, and a doctor not available, care should be taken to localize infection by painting iodine around the edges of the sores or by using compresses soaked in a two per cent solution of aluminium acetate or any other cooling substance like soda or boracic acid. No application should be made when the sores are oozing because they may seal over and aggravate conditions.

No. 240 -- Wed. May 28, 1941 -- Value of our Auxiliary Services

"It is to the great social and welfare organizations, grouped together for convenience of administration in Canadian Auxiliary Services, that we look for the provision of the valued extras in the way of comforts and conveniences and personal help which otherwise, could not be made available or distributed to the individuals we desire to benefit," Lieut.-General Andrew McNaughton, Canadian Corps Commander, stated in a broadcast from England this week, in behalf of the united appeal of the Y.M.C.A., Salvation Army, Canadian Legion, Knights of Columbus, Imperial Order Daughters of the Empire and Y.W.C.A.

"The wholesome use of leisure and the satisfaction of personal needs are problems which do not lend themselves to being solved effectively through the complex and highly specialized mechanism of military procedure," he pointed out, adding, "it is in this field of useful and constructive effort that the great Canadian social and welfare organizations have sought and found their opportunity for useful service, and it is through them that the people of Canada can give expression to their thoughtfulness and goodwill for their fellow citizens in the Armed forces both overseas and yet in Canada."

No. 241 -- Thurs. May 29, 1941 -- Co-ordinating War Effort

Speaking in the House of Commons recently, Col. the Hon. J.L. Ralston, explained as follows the co-ordination of the Government's war effort:

First, we have a wartime Prime Minister as president of the privy council and chairman of the war committee of the cabinet. On the war committee of the cabinet we have the ministers of the three defence services, the Minister of Munitions and Supply, the Minister of Finance, the Minister of Justice, the Minister of

National War Services, the Minister of Mines and Resources, and the Hon. Senator Dandurand. That body is the body co-ordinating governmental effort in connection with this war.

To some extent those three services are naturally competing in connection with their requirements. The army needs small arms ammunition; the navy needs small arms ammunition, and the air force needs it. So with uniforms, clothing, armaments--so with everything that goes to the fighting forces.

It is provided that where a particular project affects more than one service the Minister of National Defence, in consultation with the minister or ministers of the other service or services concerned shall make a decision.

But suppose we have a situation wherein the three defence services are in competition. That is ironed out and co-ordinated first by an inter-service priorities committee. That is a committee composed of representatives of the staffs of the three services, which meets and functions and makes recommendations to the ministers.

The ministers meet in the defence council, which is composed of the three ministers, the three deputy ministers and three chiefs of staff.

Next comes the ministry of munitions and supply. In munitions and supply you find the whole purchasing power, not of one service only, as in England, but of the three services--for the navy, the army and the air force. In England we find the minister of munitions and supply purchasing only for the army, and certain raw materials for the other services. The navy does its own purchasing, and the ministry of aircraft production does purchasing for the air ministry.

Co-ordination is effected in Canada by means of the Minister of Munitions and Supply, who not only purchases for all three Canadian defence services, but also purchases on British account as well. So he has in his charge the full range of the organization of industry in Canada to meet these combined requirements, and has the authority to deal with the raw materials which are needed in connection with that industry.

That is dealt with by means of controllers within the Department of Munitions and Supply. There are controllers for the various commodities, who with some controllers in the Department of Labour meet together and form a committee of controllers who co-ordinate the whole matter of supply and production of raw materials. That is the Department of Munitions and Supply. First we have the defence services; second, supplies, and then third, man-power is to be dealt with.

That is done in the Department of Labour where we have the labour co-ordination committee, a committee headed by the deputy minister of labour, and composed of representatives, first, of labour; second, of the national labour supply council, which is an advisory body, as everyone knows, representing industry and representing labour, a representative of the Department of National War Services and a representative of the defence services. That brings about a complete co-ordination and integration among the services in which man-power may be required.

Every demand which can be made upon man-power in Canada is looked into by the labour co-ordinating committee, and along with that is the national labour supply board, of which I spoke. In the result we have, first, the defence services; second, munitions and supply; third, labour; and, fourth, finance, all tying up in the war committee of the cabinet. With this tie-up in the war committee of the cabinet, headed by the war-time Prime Minister, the blueprint of the war effort of Canada is worked out

to the highest degree we possibly can; nobody claims perfection because the work to be done changes from day to day and almost from hour to hour.

No. 242 — Fri. May 30, 1941 — Beating Ploughshares into Tools of War

A century-old Canadian manufacturing company is doing an efficient job of beating ploughshares into the tools of war.

The factory is situated in an Eastern Ontario town. Not even a crumbling foundation stone remains of the crude blacksmith shop which was the birthplace of the modern, sprawling industry which stands upon its site today.

For more than a hundred years this factory has been turning out farm implements that have played an important role in the development of Canadian agriculture. It still makes some implements, essential to Canadian farmers who are producing wartime food requirements, but there is an ever-increasing diversion of skilled workmen and precious machines to war work.

Many of the employees are veterans whose names have been on the payrolls for 30 or 40 years. There are some whose fathers and grandfathers before them were employed by this same company, handing down their skill and knowledge from generation to generation. They have devoted their lives to making things which stand as a symbol of peace. Now they are toiling as they never toiled before to produce a variety of the weapons of war.

Chief production at present is that of rifle grenades. These are similar to the Mills bombs so familiar to those who served in the First Great War, but they have an attachment which makes it possible for them to be fired from a discharger on the muzzle of an army rifle. This increases both the range and accuracy of the grenade, a versatile and deadly weapon for close combat.

The grenade is egg-shaped, about four inches long and two inches in diameter. The outer surface is corrugated, both to give the thrower a better grip when the grenade is used for hand throwing, and to increase fragmentation of the steel case when it bursts.

A simple operation transforms a rifle grenade into a hand grenade in a matter of seconds.

A spring lever is recessed in the side of the bomb, which is held in place by a cotter pin. When the bomb is thrown by hand, the soldier pulls out the cotter pin, which serves as a safety catch to prevent untimely explosion in handling. The grenade is still safe so long as the lever in the side is depressed. When the grenade is thrown, removal of pressure on the lever releases a spring which, in turn, sets off the fuse. This time fuse burns while the grenade is in flight and ignites the explosive charge after a lapse of several seconds. The steel case is blown to pieces with terrific force, with devastating results to all who happen to be within a radius of 15 or 20 feet.

The rifle grenade differs from the hand grenade in that it has a circular steel plate, known as a gas check, attached to the base end. This gas check fits smoothly into a tubular discharger attached to the muzzle of a rifle. The butt end of the rifle is held firmly upon the ground and a blank cartridge is inserted in the breech and fired in the usual way. The gas from the exploding cartridge builds up terrific driving power against the base plate of the grenade and hurls it upon its

mission of death. The cotter pin is pulled out when the grenade is placed in the discharger, and the lever is held down by the walls of the cylinder until the grenade is on its way.

At first glance the rifle grenade seems to be a comparatively simple thing to make, but actually it is a carefully designed device requiring a high degree of precision in manufacture. Some of the tolerances in machining are as fine as 3/1000th of an inch—about one-tenth of the thickness of a human hair. Each tiny component must be cut, shaped, threaded, and fitted with great exactitude.

The steel grenade shells are cast in lots of eight in modern moulding machines. After the roughness of the cast has been smoothed off by grinding, and in giant "rumbling" machines and the shot blast, the egg-shaped bomb goes to the machine shop for drilling, threading, and finishing. These operations require much skill.

Young apprentices, each trained to perform a single operation and to do it well, assemble the grenades. The body of the bomb is cleaned thoroughly and varnished inside and out. Workers insert the tubular fuse holder -- the firing pin, side lever, cotter pin and ring, gas check, filling plug, and other parts.

Thousands of grenades are made in this factory every week, and the plant is geared to meet almost any production demand.

No. 243 — Sat. May 31, 1941 — Gypsum in Canada

Gypsum production in Canada set an all-time record in 1940, when the output amounted to 1,448,788 tons valued at \$2,065,933 as compared with 1,421,934 tons valued at \$1,935,127 in 1939, the previous record year.

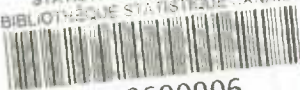
Canada probably ranked third among the world's gypsum producers in 1940, the larger producers being the United Kingdom and United States. Spanish Morocco is also a very large producer.

The Dominion has extensive deposits of high-grade gypsum, favourably situated for commercial exploitation. Nova Scotia is the largest producer, and is followed by Ontario, New Brunswick, Manitoba, and British Columbia. The materials produced in Canada are the hydrous calcium sulphate, commonly known as gypsum, the partly dehydrated product known as plaster of Paris, or wall plaster, and the anhydrous calcium sulphate known as anhydrite.

The use of gypsum products in the building trades has made rapid progress in recent years because of their lightness, durability, fire-resisting, insulating, and acoustic properties. Tiles, wallboards, blocks, and special insulating and acoustic plasters have been developed. The larger portion of the crude gypsum quarried in Canada is shipped to the United States for the manufacture of gypsum products, and industrial conditions in that country will continue to have an important bearing on the industry.

Until about four years ago the Canadian production of anhydrite was exported principally to the United States, where it is used as a fertilizer for the peanut crop in the southern Atlantic seaboard states. In 1937 the market for Canadian anhydrite was extended to England, where the material is used for the manufacture of sulphuric acid, ammonium sulphate, cement and special plasters. Owing to the war, overseas shipments have been curtailed, but it is possible that an industry will be started in Canada in which anhydrite will be used in the manufacture of products similar to those made in England.

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