

11-D-02

APR 4 1940

C-2

DEPARTMENT OF  
TRADE AND COMMERCE



DISCARD  
ELIMINER

**A FACT A DAY ABOUT CANADA**

FROM THE

**DOMINION BUREAU OF STATISTICS**

**FEBRUARY 1940**

**SIXTH SERIES**

LIBRARY  
NATIONAL MUSEUM  
OF CANADA

Published by Authority of the HON. W. D. EULER,  
Minister of Trade and Commerce.

Price 25 cents per annum



### Contents

- |                                    |  |
|------------------------------------|--|
| 124. Utilizing Sea Lions.          | 139. Potash.                                   |
| 125. The Story of Seals.           | 140. Choosing Fertilizers.                     |
| 126. Reward Wheat.                 | 141. Cobaltized Salt for New Zealand<br>Sheep. |
| 127. Boys' and Girls' Farm Clubs.  | 142. The Snowshoe.                             |
| 128. Fruit Juices.                 | 143. Fish Culture in National Parks.           |
| 129. Brazil Nuts.                  | 144. Undergrade Potatoes.                      |
| 130. Juvenile Delinquents.         | 145. The Modern Grip.                          |
| 131. Some Facts about Wheat Flour. | 146. Cold Storage.                             |
| 132. Hatchery Fish.                | 147. Wild Meat for the Larder - 1.             |
| 133. Manufacturing Silk Stockings. | 148. Wild Meat for the Larder - 2.             |
| 134. Recent Progress in Finland.   | 149. Wood Ash for Fertilizer.                  |
| 135. Ice Box Flowers.              | 150. Warble Fly Menace.                        |
| 136. Banishing Wheat Rust.         | 151. A Bit of Ski History.                     |
| 137. Animal Nutrition              | 152. Leap Year.                                |
| 138. Growing Hardwoods             |  |

---

James Muir,

Editor.

LIBRARY  
GEOLOGICAL SURVEY  
OF CANADA

### ERRATUM

Please delete the words "cheese and eggs" from the first line of the third paragraph on page 109 of this issue.



from the

Dominion Bureau of Statistics

No. 124. Thurs. Feb. 1, 1940 -- Utilizing Sea Lions

Control of the Sea Lion is a headache on the Pacific coast. It preys on the salmon runs and other fisheries. It does immense damage.

Now, however, there is a prospect that the sea lion will be put to industrial use. The carcasses are to be used in food products for the fur farms, particularly those of British Columbia.

The Sea Lion is the name given the larger members of the eared seals. The largest species is the northern sea lion from the North Pacific and Behring Sea; it reaches 13 feet in length. The Patagonian sea lion possesses a distinct mane and small ears, and the Californian form is much smaller. The Californian sea lion is the commonest species in captivity and is well known for its intelligence, activity and hoarse, barking voice. It is about double the length of the fur seal.

The big sea lion of the North Pacific has wrought much mischief, not only to the salmon runs, but to the nets of the British Columbia fishermen generally. So fishermen in recent years have pressed for control to prevent concentration of the troublesome mammals in productive areas. A measure of control of the size of the sea lion herds is at present provided by the Department of Fisheries who conduct annual hunts at the points most frequented by the seagoing trouble makers, and at points where their destructiveness has been most in evidence.

From time to time attempts have been made to utilize the sea lion commercially. Only a partial measure of success was achieved and as a result the animals have been left virtually unexploited. Experiments were carried out more recently in tanning sea lion hides into leather for glove manufacture. Apparently a product of quite good quality was secured but the possibilities of any considerable business in this field are still obscure.

The new proposal is that fishermen or others will shoot the sea lions and deliver them at points where facilities are available to ice the carcasses. They will later be removed to a freezing establishment where they will be frozen and preserved as food for the fur bearing animals of the various fur ranches.

The experiment will be made under close observation of departmental officials to determine the number of sea lions taken and to assure that full and proper utilization is made of the carcasses. It is not at present proposed to license the persons or firms engaged in killing the animals, but if operations become intensive such a course may be necessary for control purposes and to ensure that no threat of extermination of the herds is involved.

---

No. 125. Fri. Feb. 2, 1940 -- The Story of Seals

From time to time a good deal has been said about sealskin and the seal markets but not much of the story of the seal itself, nor of the seal-hunters. This is suggested by yesterday's Fact about the hunting of the sea lion.

Seals, and particularly walruses or "morses" were taken in the North Atlantic,



on the border of the Arctic, by whalers from the beginning of northern whaling in the early 1600's, for their skins, blubber and tusks. The tusks were an ivory somewhat inferior to the ivory of Africa. In the most prosperous days of northern whaling the whalers neglected seals, but towards the end of the 1800's, the whalers were again glad to include them in their catch. Sealing as a separate occupation had meanwhile developed in the 1700's and early 1800's. The pelts were at that time more valuable than at any later time.

The Greenland seal and the hooded seal are the chief species taken. The grey seal and the common seal are not at present commercially exploited, although the common seal is killed by fishermen under the conviction, not at present too well founded, that it causes great depredations among the food species.

Atlantic sealing occurs in the spring and early summer from Nova Zembla to Newfoundland and Labrador. Sealers sail for the eastern grounds mainly from Norwegian ports, and to the western grounds chiefly from Newfoundland and United States ports. There are international agreements regarding the periods of hunting.

The fur seals differ from those mentioned because they possess a permanent under coating of short, soft fur, which is the sealskin of the furrier. They were opened to exploitation by the voyage of Behring in 1741 in the Pacific-Arctic zone. Their migrations cover great areas, from the latitude of southern Japan on the west and from southern California on the east, to the great rookeries on Commander and Pribiloff Islands in the north respectively.

Seals in the North Atlantic are estimated at about 600,000. At one time in the North Pacific there were millions, but the herds were greatly reduced by indiscriminate slaughter. Now the take is regulated by international agreement. The fur seal adult male is about six feet long and four and a half in girth.

Formerly the fur seal was common in southern seas and the Antarctic, and was abundant in South Georgia and the Falkland Islands. In two seasons, 1820-21 and 1821-22, it was estimated that 1,200,000 fur seals were taken from South Georgia and 320,000 from the South Shetlands alone, with 940 tons of elephant seal oil.

The chief modern sealing of that region is for the elephant seal. Elephant seals are of great size, the males sometimes 20 feet in length, the females eight or nine feet.

---

No. 126. Sat. Feb. 3, 1940 -- Reward Wheat

It will have been noted that Reward Wheat was the variety which brought championship to Canada at the recent international competition at Chicago. What is Reward Wheat?

Reward Wheat is the product of the Central Experimental Farm at Ottawa, whose contribution to agricultural progress in Canada is one of the marvels of our economic life. A scientific agriculturist by the name of Saunders, who earned a humble salary, gave Canada one of its great gifts with his Marquis wheat. In his declining years he was knighted by the King, which event helped to bring home to his countrymen the service he had rendered.

Now Reward Wheat is a cross between Marquis and the early maturing variety Prelude. That cross was made in 1911. In 1928 it was released for by growers

and has been the title-winning variety at Chicago in recent years.

The Reward Wheat, which was the championship in 1938 and 1939, was grown on the farm of the Rigby family near Wembley, Alberta. It was from certified seed supplied two years ago by the Dominion Experimental Farm at Beaverlodge, Alberta.

There is more than an ordinary story behind the winning of the wheat championship two years in succession by young Lloyd Rigby. The "wheat king" is 21 years old and a first year student in agriculture at the University of Alberta. Last year his brother, Justyn Rigby, 24 years old, won the international oats championship.

Now, the point is that the Rigby family successes in grain growing started from membership in the local club in their famous district of the Canadian Boys and Girls Farm Clubs.

By the way, the International Wheat Championship has been won by Canada 25 times in 29 consecutive years. Twelve times the championship has gone to Alberta wheat growers.

---

No. 127. Sun. Feb. 4, 1940 -- Boys' and Girls' Farm Clubs

Following up what was said yesterday about the success of an Alberta farm family in winning championships because of what they learned at their local Boys' Farm Club, some very interesting information might be vouchsafed regarding those clubs. The motto of the clubs is "Learn to do by doing."

The Department of Agriculture made the following definite statement in the fall of last year: "In all agricultural fairs and exhibitions that have been held throughout the Dominion so far this year, no feature has been so outstanding as the work of the Boys' and Girls' Farm Clubs."

This junior division of Canadian agriculture is composed of the many and varied junior farm clubs in all the provinces, the provincial and district grain, potato, calf, swine, poultry and other clubs which are all co-ordinated through the medium of the Canadian Council on Boys' and Girls' Farm Work.

The reason of the spectacular success made by the clubs in the competitive lists of the exhibitions is readily apparent, for not only have the young farmers and farm-ettes of Canada produced exhibits of the highest quality but by their ardour and enthusiasm are giving a new leadership to Canadian agriculture.

There are many projects embodied in the programme of the work of the Boys' and Girls' Farm Clubs of Canada -- live stock, field crops, horticulture, and home economics. As results of this work, potato production in one area has been revolutionized; in other districts, production of live stock has been raised to a high standard and in other areas thousands of bushels of grain have been added to production.

Particular examples of excellent work were seen at last year's Ottawa exhibition when 177 boys showed high-quality calves they had acquired and reared as part of their club work; also at the Lakehead Exhibition at Port Arthur where a young farmer exhibited no less than 11 animals and the champion Holstein cow, all acquired as a result of his calf club work.



In Alberta, 74 wheat clubs, approximately 1,385 boys, have built up a substantial supply of excellent seed for the province by seeding over 5,500 acres to registered, certified, and improved wheat seed. In Ontario and other provinces, several fine herds of cattle can trace their establishment to what the boys and girls of these clubs have been doing. In short, the fine work of the junior division is being carried out with enthusiasm in every province.

The Boys' and Girls' Farm Clubs represent an active membership of about 40,000, and every year since the movement began 25 years ago the membership keeps on increasing.

---

No. 128. Mon. Feb. 5, 1940 --- Fruit Juices

Fruit juices have become so popular that some remarks upon the method of preparing them may be worth while. The extraction of the juice from such important citrus fruits as orange, lemon and grapefruit, is carried out on the same principle as we do it at home with the common glass extractor. The usual method is that after the whole fruit has been washed it is cut in half at right angles to the axis of growth and the juice extracted by pressing the halved fruit against a revolving conical-ribbed or grooved extractor or burrer. By adjusting the speed of the burrer it can be so arranged that the inclusion in the juice of any considerable amount of pith and essential oil from the peel can be avoided.

The juices are usually diluted two or three times in making up beverages, and some preservative such as sulphur dioxide is added. In the case of orange juice a certain amount is prepared in the concentrated form in order to save bulk in shipment, and the juice is roughly filtered before concentration.

It is interesting to observe that the demand in the United Kingdom is for cloudy citrous fruit juices. The removal of suspended matter, though in some cases improving appearance, often detracts considerably from the colour, flavour and nutritive value of the expressed juices. The colour and flavour of orange juice depends to a large extent on the suspended particulars which it contains, and the removal of these gives a straw-yellow product lacking aroma and flavour. Orange juice is therefore now seldom prepared in the clear form.

The efforts in the United States to market citrus juices in a form closely resembling the natural juice has involved additional stages in their preparation. The modern method of manufacturing citrus juices which is carried out extensively in the United States proceeds along the following general lines. After the screening of the juice to eliminate the seeds and coarse pulp, it is subjected to a process of de-aeration, that is, the removal of the occluded air in the juice by means of vacuum treatment. De-aeration is accomplished by passing the juice in the form of a fine spray into an evacuated tank. This removes any air which has been occluded in the juice and in the fruit particles. After the tank is partly filled the juice is held under a vacuum of at least 27 inches for about 10 minutes. The vacuum may then be relieved, preferably with an inert gas such as nitrogen.

If a clear juice is required, the method most generally applicable depends on the fact that by heating the juice the colloidal matter is coagulated and will then settle readily and can be removed by filtration. It should be remarked that grapefruit juice has better keeping qualities than either orange or lemon.



We import considerably over a million gallons of fruit juices in a year, most of which come from the United States.

---

No. 129. Tues. Feb. 6, 1940 --- Brazil Nuts

The Brazil nut trade has roughly doubled since the opening of the Great War. The United Kingdom and the United States are the chief consuming countries, production being entirely a Brazilian monopoly, although some nuts are obtained from Bolivia. The tree has been introduced into Ceylon and Malaya, and botanical studies of the limited material in those countries suggest that quite possibly only one species actually exists. Whether this is so or not, it seems quite likely, judging from the variation shown in the nuts coming from wild trees in Brazil, that cultivation of the tree would bring to light a number of different strains.

The Brazil nut tree is indigenous to the Amazon basin, where it is known as "castanheira," the nut itself being called "castanha do Para." The nuts are at present obtained almost exclusively from trees growing wild in the states of Para and Amazonas, in which there are a number of important producing districts. Either the trees and the land are in definite ownership, or else harvesting rights are owned. Little in the way of cultivation is nominally undertaken, but in more recent years some attention has been directed to the establishment of plantations. The tree grows naturally in clumps or groves in the forest and is to be found at some distance from the waterways as it does not thrive on swampy land. Some trees are found on raised ground close to the river. In districts where the tree grows, the temperatures recorded show little variation from month to month.

Brazil nuts are much favoured in Canada, and we import annually considerably more than two million pounds, shelled and unshelled.

---

No. 130. Wed. Feb. 7, 1940 --- Juvenile Delinquents

It will occur to most people, as indeed it is a fact made plain regularly by reports in the Press of Canada, that the Dominion has made substantial progress in the control of juvenile crime, although the devil is always afoot.

There is no doubt also that the improvement observed is due directly to the good influence and wise understanding that juvenile courts and the magistrates who preside over them, have exercised. The imp of mischief is strong in most children and in older days when the little mischief-makers were unfortunate enough to get into the hands of the law, instead of being just draped across their father's knee, they were apt, through that terrible experience, to take to the down grade.

We do better nowadays and so we find that not so many new criminals, comparatively speaking, are being made. A very large number of those who now come before the courts are incorrigible. Some statistics will make this clear.

The most recent yearly record available, with all its ramifications, is for 1938. The returns of juvenile statistics for that year show a marked decrease in the number of cases brought before the courts as compared with the 1937 figure. The decrease totals 746 or 7.71 per cent. That is quite a notable reduction,

especially when one is reminded that increases in Quebec and Manitoba in 1938 were more than neutralized by decreases in all other provinces.

In 1938 the total number of delinquents dealt with by the courts for major offences was 5,055, of whom 3,537 appeared for the first time, 767 twice, 357 thrice, 144 four times and 250 five times. The total number of repeaters was 1,518. The number of delinquents before the courts in 1937 was 5,224. The proportion of repeaters in 1936, 1937 and 1938 was greater than for the average year.

Out of 5,055 juvenile delinquents convicted of major offences, 4,837 were born in Canada and 218 in other countries. Of Canadian born delinquents, 3,268 had both parents born in Canada, while 339 had one parent born abroad.

The bulk of the charges under which delinquents were convicted was theft in its various forms.

---

No. 131. Thurs. Feb. 8, 1940 -- Some Facts about Wheat Flour

To those of us who have practically no knowledge of the making of wheat flour, that commodity which in itself makes Canada known throughout the world, it is an entrancing mystery how that fine, smooth substance is made. In general we have an idea that something in the nature of rolling mills or crushers does the trick. But there is a good deal more to good flour making than that.

The wheat berry is somewhat barrel-shaped. At the top is a tuft of hairs, which is appropriately called the beard. At the lower end on the outer side is a small peculiarly shaped protuberance which indicates the position of the germ beneath the bran. On the opposite inner side is a deep furrow running the whole length of the grain. This is the crease which harbours dust and micro-organisms and which creates difficulties in the cleaning operation preparatory to milling.

Cut a transverse section across the grain and examine with a lens the internal structure of the berry. Beginning from the outside inwards, the outer skins form the bran.

There is a single layer of rectangular cells full of minute grains of nitrogenous matter. The function of these cells is to supply the young growing embryo with its proper nitrogenous food. The starch-containing cells are packed full of starch granules of varying size, and the spaces between the cell walls are probably filled with the substances known as glutine.

The germ, or embryo, of the wheat berry is a somewhat triangular looking body, of a yellowish, buttery appearance when the grain is new. If the grain is old, however, the germ will be dark almost to a deep brown in colour and the taste much less pleasant. Wheat germs which come from the mill are pale, yellowish disks varying from 3/16 to 1/4 of an inch in diameter. When in a suitable condition for food, the germ must possess a pleasant, oily smell and an agreeable, greasy flavour. In a decomposed state the germ is dangerous to health.

The object of the miller is to separate the endosperm or floury portion from the bran coat and the germ, and to reduce the floury portion to fine flour. This is only possible because the bran and germ are far tougher than the endosperm. The successful miller is able to effect a thorough separation of the endosperm from the



germ and bran to produce a type of flour that will be clean and white and with good keeping qualities.

The constituents of the wheat kernel are over 83 per cent endosperm, which is largely of starch content, 15 per cent bran and  $1\frac{1}{2}$  per cent germ. The germ is rich in fat and when loosened in the breaking process it may be graded with the coarser middlings, which are generally known as germ middlings. The wheat germ is good material in preparing human food such as in fortifying cereal products, but at the present time it is difficult to keep the wheat germ oil from becoming rancid; therefore the germ has to be separated completely from the finished flour.

Canada exports annually four or five million barrels of wheat flour, of which considerably more than half go to the United Kingdom alone. The value of the export is about 16 or 17 million dollars.

---

No. 132. Thurs. Feb. 9, 1940 -- Hatchery Fish

Over 34,300,000 little fish went from the hatcheries of the Dominion Department of Fisheries into suitable waters of the Maritime Provinces and British Columbia during 1939, representing the efforts of the Fish Culture Branch to offset the reductions made in Canada's fish population by commercial fishing, angling, and natural losses. Most of these little salmon and trout had been carefully fed in hatchery ponds before liberation and all reached their new homes in a strong and vigorous condition.

The "planting" was part of the regular programme of maintenance and improvement of fisheries in areas where the fishing is under Federal administration.

Atlantic salmon led the distribution list with 21,300,000 of this species planted in all. There were 11,600,000 speckled trout placed in the various streams, while over a million sockeye salmon were distributed in British Columbia waters. Sebago salmon, Kamloops trout, and Rainbow trout were the other species making up the total distribution.

Nova Scotia led the distribution by provinces, with 17,200,000 fish planted. Of the total in this province, 9,200,000 were Atlantic salmon, and 7,700,000 speckled trout. There were 14,300,000 fish placed in New Brunswick streams, of which 11,300,000 were Atlantic salmon and the remainder speckled trout. Prince Edward Island had plantings of 1,700,000 fish made up of Atlantic salmon and speckled and rainbow trout.

The greater part of the plantings were fingerlings, some yearlings, and particularly among speckled trout, adult fish up to four years old were set free. These were fish held in the hatcheries as brood stock but replaced during the year with younger fish.

---

No. 133. Sat. Feb. 10, 1940 -- Manufacturing Silk Stockings

The manufacture of silk stockings has become big business in Canada. There is no room for doubt about that. Even in winter cold the silk stocking is very much in evidence on every street of every city, village and town. It is generally accepted by the feminine population, and the fashion, which was set by Queen Elizabeth in the

long ago days before the crowns of England and Scotland were united, is now part and parcel of our cost of living in Canada. The manufacture of silk stockings in the Dominion, both pure silk and mixed with other materials such as wool, as well as artificial silk and its mixtures, runs to over 42 million pairs in a year, with a factory value of close to 17 million dollars.

Accordingly, some of the highlights of the manufacture of hosiery are of more than passing interest. These were given at a meeting of Patent Examiners in Ottawa recently.

Raw silk arrives at the mill in skeins which are covered with gum left there by the silk worm. The skeins must first go through a soaking process to render the strands pliable. The single strands of silk are then unwound from the skeins and several of them twisted together to form a thread. This thread is wound on to cones which are set on the knitting machines. These machines knit in a flat piece the main part of the stocking without the foot. This piece is then transferred, manually, stitch by stitch, to another machine, where the foot is knit. A third machine is used to sew up the heel and toe, and another machine to sew the seam up the back.

It is interesting to note that the Germans have developed a machine that knits both the leg and the foot on the same machine. A few of these machines are now installed in Canada. Throughout the knitting process the control of temperature and humidity is an important factor.

The most complex and interesting part of the process occurs in the dyeing, where colours must be matched to a standard, where the cotton parts of the stocking must be dyed to the same shade as the silk parts, and where each different size of stocking must be kept track of.

---

#### No. 134. Sun. Feb. 11, 1940 -- Recent Progress in Finland

The progress achieved in Finland in all fields of endeavour during the past two decades and particularly during the last six or seven years has an important bearing on the electrical markets of that country, since it has greatly augmented the demand for a large variety of commodities. This progress, which has frequently been described as amazing, can be visualized with the help of a few statistical data.

The area of cultivated land increased by about 600,000 hectares (1 hectare equals 2.47104 acres) during the period 1920-38, while the per hectare yield, because of more intensive methods of tilling, has continued to grow. From an average value of 4,239,789,000 Finnish marks during the period 1921-25, the value of Finnish crops advanced to 7,588,566,000 marks in 1937.

No less conspicuous an advance was attained by the manufacturing industries in the same period. From a total of 117,229 workers employed by Finnish industries in 1920 the number increased to the pre-depression high of 169,180 in 1928 to decrease to the depression low of 127,222 in 1932. Thereafter the number increased rapidly to 207,506 in 1937, the latest year for which statistics are available. The gross value of production increased from 9,556,221,000 marks in 1932 to 21,076,045,300 in 1937.

Foreign trade value has doubled since the depression. It increased from a total turnover of 7,921,400,000 marks in 1931 (8,133,780,000 in 1932) to 13,636,147,000 marks in 1937 but decreased to 17,005,300,000 marks in 1938. Electric power generating



and transmission developments have been extensive. From somewhat more than one billion kilowatt-hours consumed in 1930, the use of electricity increased to about two and three-quarter billion in 1937, and to more than three billion in 1938.

---

No. 135. Mon. Feb. 12, 1940 -- Ice Box Flowers

A new industry has sprung into being, or rather an astonishing development of a very old industry. It is the making of Ice Box Flowers.

Years ago there was no difficulty in telling whether the flowers in a lady's corsage, or the little decoration in the lapel of a gentleman's evening coat, were artificial or not. Even at a distance there was a difference, for the real thing wilted as the night wore on but the artificial variety remained sprightly.

There is an ice box flower factory in Toronto which, so far as the Bureau of Statistics knows, is the only one of its kind in Canada. It is said to be the largest in the British Empire. The industry is only about six years old. It began in a private home, with a family of three the working staff. Today the business is housed in a factory and there are about one hundred workers.

These new artificial flowers are as close an imitation of the real thing as can be made. The blossoms are perfumed. A very wonderful thing about them is that, when the flowers are crushed, as flowers will be at a dance, they can be restored to their pristine elegance by confining them in the refrigerator for a little while. Thus there is another use for that modern complement of the kitchen. This ability to come back to life under cool and moist conditions is what has given the name "ice box" to those artificial flowers.

What has made this industry possible was the discovery that the pith of the tushia tree could be used for making petals. The tushia tree grows on the Island of Formosa off the coast of China; familiar to many Canadians as a centre of missionary activity. The pith has a soft, velvety texture and when dyed resembles both in touch and appearance petals of natural flowers.

There being only one firm manufacturing these Ice Box Flowers, the Bureau does not make public the production figures, but an indication of its extent may be gathered from the fact that some 1,500 Canadian brides last year wore them at their weddings.

---

No. 136. Tues. Feb. 13, 1940 -- Banishing Wheat Rust

In its effort to stimulate agricultural production to meet the needs of war, the Department of Agriculture is now capitalizing upon the splendid service its scientists have rendered the Dominion. We are all familiar with wheat rust and the dreadful losses it has caused in the past. But we are also familiar with the successful efforts made to combat the evil.

The recent development of rust-resistant varieties of bread wheats is one of the most notable contributions scientific research has yet made to the industry of Agriculture, states Dr. J. M. Swaine, Director, Science Service, Dominion Department of

Agriculture. Canada's cereal breeders had produced remarkably fine varieties of common wheat such as Marquis and Reward, but they were all susceptible to injury or destruction by black stem rust. The spores of the rust fungus are swept up from the south by air currents when the young wheat is growing rapidly. In years when conditions are favourable, the infection sweeps over the eastern and northern prairies, causing the most appalling losses in the yield and grades of wheat.

Extremely heavy losses occurred in the years 1904, 1916, 1923, 1927, 1935 and 1938. The losses from stem rust in 1916 alone were estimated at \$10,000,000. In 1935 about 85,000,000 bushels were lost as a result of rust. Since about 1920, cereal breeders and plant pathologists of Canada and the United States have been endeavouring to produce strains of wheat that would be resistant to black stem rust. The Canadian work has centred at the Dominion Rust Research Laboratory, Winnipeg, staffed by pathologists and cereal breeders of the Dominion Department of Agriculture. Important work has also been done at the Dominion Experimental Farm, Brandon, Man., and at the University of Saskatchewan, Saskatoon. The work has been co-ordinated by two joint associate committees of the National Research Council and the Dominion Department of Agriculture. The United States workers have produced a variety, "Thatcher," resistant to black stem rust, which has been already widely distributed in the eastern part of the Canadian prairies.

The Dominion Rust Research Laboratory has recently issued two new rust-resistant varieties, "Renown" and "Regent," and the University of Saskatchewan has distributed another variety, "Apex," all of which are being multiplied and distributed as rapidly as possible. Other and possibly better productions are now being perfected. The new varieties will rapidly replace the old susceptible ones in the rust areas of the prairies, and the great losses from rust epidemics should soon cease to occur.

---

No. 137. Wed. Feb. 14, 1940 --- Animal Nutrition

Banishing wheat rust, which was referred to yesterday, is an important contribution to the war effort of Canada. None the less important, however, is the question of Animal Nutrition. We must have cereal food, but also we must have animal food, in the form of milk or meat. In that connection, therefore, it is of extreme importance to fix in one's mind some definite and fundamental ideas on the subject.

In the nutrition of domestic animals, chemistry and physiology have made great advances, observed Dr. J. M. Swaine, Director, Science Service, Dominion Department of Agriculture, in a recent address to the Royal Society of Canada. With nutrition, as well as with disease, researches on animals and man are closely linked. The discovery of the special values in young forage is having a marked effect in live stock feeding. When properly prepared from young plants, hay contains minerals, proteins and vitamins in concentrated form. Cereal grass and legumes cut in the young and rapidly growing stage, properly dried and ensiled so as to preserve the carotene content, are now used extensively in live stock feeding.

The poorer classes of the Finnish population receive a large part of their vitamin supply in the winter time from milk, of which they consume relatively large quantities, states a recent report. The vitamin A content of the winter milk was found to be only about one-third as high as that of summer milk, when cows were fed in the ordinary way. Finnish bio-chemists worked out the following procedure: Clover and lucerne, which could be frequently cropped, were cut in the green stage and ensiled in a special way so that the carotene content was largely retained, and when this ensilage was fed to cows it was found that even in winter the vitamin A



content of the milk was as high as in summer milk; sufficient, that is to say, to provide the human requirement in quantities of milk that could ordinarily be purchased and used.

---

No. 138. Thurs. Feb. 15, 1940 -- Growing Hardwoods

Canadian timber operators would do well to pay more attention to hardwoods, according to the Dominion Forest Service, which points out that on 40 per cent of the forest lands in Canada hardwoods are an important factor. Canada at war has emphasized this importance. The hardwoods, which include all broad-leaved trees, comprise about 22 per cent of the total cubic volume of timber of merchantable size on accessible areas. According to the latest available figures, the accessible stand of merchantable hardwood timber in the eastern provinces -- Prince Edward Island, Nova Scotia, New Brunswick, Quebec, and Ontario -- amounts to 23,339 million board feet of saw timber size and 216 million cords which might be used for fuelwood or other purposes. Though there are more than 90 species of hardwoods or broad-leaved trees in Canada, the principal ones from the standpoint of abundance and commercial importance are yellow and white birch, sugar and red maple, poplar, beech, basswood, ash, elm, red and white oak.

In the past hardwoods have been to a large extent overlooked by timber owners, who seldom even include the amount of hardwood in the estimates of the timber on their limits. The use of air photography for forest inventories is now supplying more information in regard to the hardwood resources. Among the principal reasons that the hardwoods have been ignored are that the forest industries have been interested primarily in the softwoods, and that the practice in logging in Eastern Canada is to float the logs from the woods to the mills. Conditions are now changing owing in part to a growing appreciation of the utility of Canadian hardwoods, and also to the increasing use of mechanical logging equipment and truck transportation.

While hardwoods comprise about 40 per cent of the total annual cut of wood for all purposes including fuelwood, only about 6.5 per cent of the lumber is hardwood. The principal uses for hardwood lumber are flooring, interior finish, doors, furniture, turnery, agricultural implements, vessels and plywood. Hardwoods are also being used to an increasing extent for railway ties and pulpwood.

The growth of hardwoods should be promoted, especially on the more accessible areas such as farmers' woodlots. The ideal forest is composed of a mixture of softwood and hardwood. Not only does this mixture maintain better soil conditions, but the association of the species produces higher quality wood of both classes. Mixed stands are also less subject to serious insect attacks and to the spread of diseases, which are nearly always confined to one species or at least to one genus of trees.

---

No. 139. Fri. Feb. 16, 1940 -- Potash

Potash has become very important these war times and, since the amount that Canada produces for fertilizer purposes is very small, it is desirable to conserve and use to the best advantage such local potash-bearing materials as wood ashes, says the Chemistry division of the Department of Agriculture.

Potash was originally a vegetable alkali obtained by leaching wood ashes, evaporating and calcining, commonly called carbonate of potash or pearl-ash. Soda and potash were not distinguished by old-time chemists, but in 1807 Davy, the great English chemist, separated them. Various plants take up potash salts and the refuse of beet-roots has been utilized as a source of potash. After the electrolytic production by Davy and others, it came to be understood that a metallic element was being dealt with and potassium was developed.

Prior to the First Great War the world's supply of commercial potash came almost wholly from mines in Germany and Austria, but it was common knowledge to geologists everywhere that potash occurs very extensively in nature, being a component of granites and most other igneous rocks. It is estimated to form three per cent of the world's crust and in the dry saline matter from evaporated river waters there is generally about two per cent of potassium oxide and in the ocean from one to two per cent.

Germany never regained the trade in these fertilizers that she lost in the First Great War. While we had been getting some large quantities from that country the bulk of our supplies now come from other countries, chiefly the United States.

Says the Department of Agriculture: The pure ash of some woods contains as much as 11 per cent of potash, but in practice this high figure is never attained, mainly because varying amounts of soil, charcoal, and other extraneous materials are present in domestic wood ashes. In some samples analyzed by the Division of Chemistry, Science Service, these impurities have been as high as 60 per cent.

Wood-ashes should be kept under cover, for when they are exposed to rain the normal four per cent to six per cent potash is reduced to two per cent or less. The largest constituent of wood-ashes is carbonate of lime, which may amount to 70 per cent of the freshly burnt ash.

Wood-ashes, owing to their high lime content are particularly adapted to acid soils, especially acid peats and mucks. Their potash content makes them desirable for clover and mangels, both heavy consumers of lime and potash. They should not be applied to potatoes, since their alkaline nature encourages the growth of scab.

In addition to potash and lime, wood-ashes contain some two per cent of phosphoric acid which gradually becomes available.

Suggested rates of application are 1200 to 1500 pounds per acre, which, if the ashes are clean and unleached, should supply 60 to 70 pounds of potash, 600 to 1100 pounds of carbonate of lime, and 24 to 30 pounds of phosphoric acid.

---

#### No. 140. Sat. Feb. 17, 1940 --- Choosing Fertilizers

There is a great and growing desire on the part of the Canadian people to grow food this summer to an extent never before accomplished. It will be very helpful in winning the Second Great War. Here, then, is some helpful information on the subject of Fertilizers from the Department of Agriculture.

Choosing a fertilizer for a specific crop is a matter which should receive careful consideration. The selection of a suitable mixture is less difficult when information is available in regard to the amounts of available nitrogen, phosphoric acid and potash of the soil, the soil reaction, and response of crops to previous



fertilizer treatments. Ability to interpret plant food deficiency symptoms is also helpful in arriving at the needs of the crop for additional plant food. In many instances, however, this information is not available to the farmer, and in such cases the nature of the soil and its past manurial treatment and cropping may be taken into account to good advantage.

Clay soils are by nature more plentifully provided with the mineral plant food substances than are sandy soils; the latter being more open and containing less colloidal mater may lose an appreciable amount of their available nitrogen and potash through leaching, particularly where the soil is low in organic matter. Thus, on light sandy loams it is customary to apply a fertilizer mixture, such as a 4-8-10 containing a high proportion of potash and sufficient nitrogen to result in satisfactory vegetative growth. Lack of sufficient nitrogen in the soil is usually reflected in the pale appearance of the plant.

Peat and muck soils, consisting largely of plant residues, are usually deficient in mineral matter; in their fertilizer treatment potash is generally of more importance than phosphoric acid, and some nitrogen in available form may be required to encourage early growth. Thus the application of a mixture such as the 2-8-16 to muck soils is common practice.

Generally, when the soil has been enriched by applications of manure the supplemental fertilizer may be smaller in quantity and need not contain such a large proportion of nitrogen and potash as would be desirable where no manure has been, or is being applied. To meet this condition a 2-12-6 mixture may be used. On well-manured soils the application of superphosphate alone is often sufficient to produce good yields.

Yields which may be obtained from the use of fertilizers are frequently limited by an unsuitable soil reaction and a low organic matter content. These limiting factors should be corrected if maximum results are to be obtained.

---

No. 141. Sun. Feb. 18, 1940 -- Cobaltized Salt for New Zealand Sheep

Here is a very illuminative bit of information which shows how Canada is playing her part in the Empire war effort outside her own wide borders. It is a little bit of cooperative effort with New Zealand, which is revealed through Canadian trade figures with our sister Dominion in the Antipodes.

It seems that the veterinary authorities in New Zealand during the past few years have observed an increase in deficiency disease amongst sheep. The importance of sheep to New Zealand is immense, far, far more important than to Canada, comparatively speaking.

It has been found that a minute proportion of cobalt in the diet is indispensable to the health of sheep and cattle, although cattle require less than sheep. Without this very small quantity of cobalt their systems are unable to absorb and utilize either iron or copper, though there may be an ample supply of both in the pastures.

The New Zealand Department of Agriculture conducted a series of observations and experiments in the districts affected and made recommendations. The most important corrective suggested was the importation of agricultural salt, sufficiently mixed with

cobalt, to be used as a lick.

This originated the cobaltized salt block in the Canadian salt industry and, if we can forget for a moment the value of that little industrial development to Canada, and regard the matter in its highest aspect, Empire cooperation, it makes a very real contribution to the economy of the British Family of Nations.

The salt comes from the inexhaustible deposits near the city of Windsor, Ontario, and the cobalt is drawn largely from the mines at Cobalt, Ontario. Cobalt is a metallic element closely allied to iron and nickel.

---

No. 142. Mon. Feb. 19, 1940 -- The Snowshoe

Tempora mutantur. The Canadian boy of today, when making his approach to his Dad -- considerably less timid than was the approach of his father to his grandfather years ago -- for winter sport equipment, almost invariably asks for skis. His sister makes the same chime.

The Dad of today has nothing against skis whatever. Indeed, he likes to see the youngsters travel farther afield than he was able to do. Yet he has a qualm or two when he hands out the wherewithal for a pair of skis, which is just the beginning of an expense for additional accoutrements which were far beyond the dreams of his own days of puberty.

He tries, but oh, so unconvincingly to his son, to tell of the glories of the snowshoe trail of the old days, and the glitter of the ice after a January thaw, when skates were donned, and travel was taken on the rivers and lakes that made the skating pilgrimages of Christopher North to the Borderland of Scotland pale into insignificance. Even these skating thrills that the "Noctes Ambrosianae" gave his father are of only passing interest to the lad. No; it must be skis. And the old snowshoes that have lain in the attic for many a long year are to remain there still longer, simply a relic of days that are gone. It must be skis. Everybody on the street has skis, even some of the old boys and the old girls as well.

However, the snowshoe is not yet dead. Even if the herring trail is seldom to be seen on the snow as far as the suburbs of the cities, there are lots of them still around the country. The snowshoe will ever have a place in our winter scheme, maybe less for sport, but indispensable just the same. The factories are still turning out two or three thousand pairs a year and that does not include the home-made article, such as that relic in the attic which was fondly and beautifully fashioned long ago by a clever Cree on the banks of the Missinaibi River.

---

No. 143. Tues. Feb. 20, 1940 -- Fish Culture in National Parks

More than two and one-half million trout fry and fingerlings were distributed from fish hatcheries maintained in the national parks during 1939. About one and one-half million of the fry and fingerlings were used in re-stocking operations in Banff, Jasper, Waterton Lakes, Yoho and Kootenay National Parks in Alberta, while the remainder were distributed in provincial waters outside of the parks.



Fish hatcheries are operated in Banff and Waterton Lakes National Parks, and play an important part in maintaining the supply of game fish in the mountain parks and in the province. Yoho and Kootenay National Parks and many provincial fishing waters are served by the Banff hatchery. Provincial distribution is also made from the hatchery at Waterton Lakes. A sub-hatchery is operated in Jasper National Park, which supplies fry for the waters of that park only.

The fish reared in the park hatcheries are nearly all trout; mostly rainbow, cut-throat, speckled and Loch Leven. Newly hatched fish are known as fry until about eight weeks old. From eight to twenty weeks, they are No. 1 fingerlings, from twenty to twenty-eight weeks, No. 2, and fingerlings more than twenty-eight weeks old are classed as No. 3. Up to the present the fish distributed have been almost entirely in these four grades, but now that rearing ponds have been provided a large number of yearlings will be distributed. Some of the spawn is collected in park waters, or nearby, but other supplies come from as far afield as Wisconsin, the eastern provinces and states, and even New Mexico.

During the year fish stocking operations were carried out in other national parks, ranging eastwards from the Rockies to the Atlantic. Adult black bass obtained from the Province of Ontario were placed in Lake Waskesiu in Prince Albert National Park, Saskatchewan. Rainbow trout fingerlings, reared from fry obtained from the provincial hatchery at Fort Qu'Appelle, were distributed in Clear Lake in Riding Mountain National Park, Manitoba. In the recently established Cape Breton Highlands National Park in Nova Scotia more than 100,000 salmon fry from the Margaree hatchery were placed in the Cheticamp River.

To ascertain the results of fish stocking, a creel census was conducted in Waterton Lakes and Prince Albert National Parks. Fisheries research surveys were continued in a number of the parks, and begun in Prince Edward Island National Park where an examination was made of the "Lake of Shining Waters," featured so prominently in the novel "Anne of Green Gables," by L. M. Montgomery.

---

No. 144. Wed. Feb. 21, 1940 -- Undergrade Potatoes

Canada at war brings home to us more clearly at times what the Government and the Civil Service has accomplished in the way of protection of the public from unscrupulous adventurers in business.

There was an illustration of that thought in the Ottawa Police Court this morning. The maximum fine of \$50 and \$2 costs was imposed by the magistrate on an Ottawa dealer for supplying to the troops stationed at Rockcliffe, 26 seventy-five pound bags of undergrade potatoes contrary to Section 2 (a) of the General Regulations of the Farm Products Grades and Sales Act which covers fruits and vegetables.

In plain terms, this unscrupulous man had tried to palm off rotten potatoes on the young men who were going through hard training to equip themselves to fight in battle the enemies of their country. They were going to battle to save this man's hide, as well as ours, of course.

The Ottawa magistrate administered the penalty to the limit of his power. Someone said it would be a warning. Happily, there have been very few cases of this kind -- at least we have heard of very few.

This Section of the Act under which the conviction was made states "No person shall pack, transport, advertise, display or offer for sale, sell or have in possession for sale any produce which has not been graded and inspected and packed and marked in accordance with the provisions of this Act and the regulations thereunder, the onus of proof of compliance with such provisions being upon the person charged."

---

No. 145. Thurs. Feb. 22, 1940 — The Modern Grip

Thirty-five years ago and more there was a parliamentary custom which has gone by the board in these changing days. Newspaper correspondents on the Press Gallery, along with the Members of the House, were presented each session with something in the way of travelling equipment, usually a grip or now and again a leather trunk.

There was more in this than met the eye of the critics of custom who arose later to blot it out. The correspondents of those days had to travel harder and farther to keep up with the peregrinations of the politicians. There was the long buggy ride in the depth of winter, varied by a grimy train journey in summer heat, lots of the one or the other and variety to burn. Travelling gear had a hard time. Sometimes it got lost altogether. One prominent newspaper man had his dumped from a sleigh into an Ontario snowbank and never saw it again.

One day in the early 1900's when the Laurier regime was under full sail, the grip arrived. But it was different. It was built flat, like a miniature cabin trunk for ocean travel that could be slipped conveniently under the bunk. The make of it aroused some comment and Col. Smith, then sergeant-at-arms, made the prophetic statement that that was the coming thing.

So it turned out to be. Note the displays of travelling accessories in the stores, glance at the passengers waiting for a train at a railway station, or the grips that are being stowed in an automobile. Hardly ever is it the Gladstone bag any more; it is the flat suitcase. Even the women's hats can be tucked into them. How often do we see the gentleman's hat box, or the lady's big round leather affair to hold her Gainsborough creation? Very rarely. Never now a carpet bag. Even the centenarians have discarded these.

Even the turkey of the lumberjack is giving place to the suitcase, and many of the soldiers are coming into camp with them also.

These leather affairs last a long time, so it seems quite remarkable to find that more than 60,000 of them are turned out in a year and the factory value is around \$400,000.

---

No. 146. Fri. Feb. 23, 1940 -- Cold Storage

B-r-r-r! Why bring that up? We bring it up because it is a necessary business in Canada. Not only are there numerous cold storage warehouses for preserving foods and other commodities but almost every urban home has a refrigerator and many farms have ice houses or ice wells. Do you know that there are also many cold storages for storing milday's furs during the summer?



Cold storage establishments have become a necessary part of our civilization, for by refrigeration we can hold perishable food products for future use and thus spread the consumption of a seasonal food throughout the year. Makers of food products too are enabled to give year-around employment because by refrigeration they can preserve the seasonal raw product until required for manufacture. Also it is a most important thing in war-time.

Quantities of food, huge in the aggregate, are held in cold storage warehouses, public and private, in Canada. On October 1 each year, for instance, butter and cheese stocks are at their highest, butter being from 50 to 65 million pounds, and cheese at from 30 to 50 million pounds. They are at their lowest on May 1, just after the seasonal increase in manufacture begins. Stocks of eggs are at their lowest on March 1 or April 1 when "Biddy" saves the situation by doing her duty of laying more abundantly. The egg stocks are at their highest on September 1, eggs in shell being from eight million to 16 million dozens and frozen egg meats from three million to six million pounds.

The stocks of dressed poultry, cheese and eggs are at their highest on January 1 with from eight to 17 million pounds in storage, and at their lowest on September 1. Pork stocks are highest on May 1 and lowest on September 1 or October 1; beef holdings are highest on December 1 or January 1. as are the stocks of mutton and lamb, while fish held in storage are in greatest quantity on November 1.

There are more Canadian apples in storage on November 1 than at any other time of year, while by July 1 very few are left. Stocks of potatoes are at their highest on December 1. Frozen fruit stocks are greatest on September 1.

According to the latest report from the Dairy and Cold Storage Branch of the Dominion Department of Agriculture, there were 406 cold storage establishments, apart from dairy factories, with an approximate capacity of 58 million cubic feet. All dairy factories, of which there are some 2,580 in Canada, have some form of refrigeration.

Wild animals have been known to have been caught by Nature and kept well under refrigeration, the best-known instance being that of the pre-historic mammoth which was discovered in Siberia in 1901 imbedded in an icefield. It was intact, the skin well preserved, and was set up in the museum at what is now called Leningrad in the same position in which it was found.

Our knowledge of refrigeration is increasing rapidly from many forms of research.

---

No. 147. Sat. Feb. 24, 1940 -- Wild Meat for the Larder - 1

We are familiar with the fact that buffalo and reindeer have thriven well in the far north, but not very many people, it seems, are aware that buffalo have been brought to Ontario. It is too early yet to know definitely how they have done, for the shipment of 25 to the 35,000-acre corral at Burwash only arrived recently.

But we do know some things very definitely about elk. Eight years ago there were no elk in Old Ontario, but in 1932 a carload of 25 were shipped from the Wainwright National Park and set free in the Pembroke Crown Game Preserve, about 100 miles northwest of Ottawa. Six additional herds were brought east and released at the Burwash, Tashota and Chapleau preserves, making 172 in all. A check was made

on their annual increase.

The latest survey shows that the various herds have almost trebled in size, and so certain were the authorities that the elk could look after themselves, that last summer the animals were released from their corrals. A number were removed to Algonquin Park, Bruce Peninsula, Nipigon-Onaman and Goulais River-Ranger Lake preserves and to Beausoleil Island in the Georgian Bay.

Today, after only eight years, elk may be found roaming freely through the wilds of Ontario. Many hunters have encountered them when they were trailing moose and deer, and it seems assured that in the near future hunters will be allowed to add the majestic elk to their bag.

Apart from the romance of the experiment, this is quite evidently going to provide a valuable addition to the food supply of Ontario.

Before leaving the subject, it might be pointed out that elk were at one time numerous in Manitoba, but the passage between Manitoba and Ontario is a difficult one, and elk in any numbers do not appear to have felt inclined to make the journey.

---

No. 148. Sun. Feb. 25, 1940 — Wild Meat for the Larder - 2

Besides buffalo and elk, with which Ontario has made a beginning as a future food supply, there are other wild things that are at present giving us food. Notable is the pheasant. Mass production has been undertaken by the Government to restore the pheasant population, which was depleted during the three-day season last October when 150,000 were bagged by the hunters. No game could withstand this indefinitely.

So the breeding of pheasants by chicken ranches is being encouraged. Last year some 30,000 birds were released in this way. The most abundant and popular variety in Ontario is the English ring-necked type. When they were introduced is not clear, but a Government report in the 90's of last century refers to them.

Then there are ruffed grouse, partridge, quail, duck, woodcock, geese. To one who is not familiar with wild life, the idea of a tightly closed season to restore losses seems to solve the problem, but apparently it is not so in all cases. It is probably correct in so far as big game animals are concerned, but not so with ruffed grouse or partridge. An official of the Ontario Department of Game and Fisheries says: "It is not man who kills off partridge. Nature is responsible for their disappearance. Like the rabbit and lemming, they have their high and low peaks — usually every ten years. A closed season, however, helps in that it brings about the peak of the increase a year or two nearer in the more settled areas."

It seems strange that Canadians do not favour rabbit meat, so popular in most other countries. It is a delicious food, to many people superior to chicken. Probably the taint of the meat when winter comes and the rabbit is feeding on cedar and other evergreens is the cause. In the fall, before the snow covers the pastures, rabbit meat is choice.

So, all in all we have a great supply of food in the wild life of the woods and open spaces.

---



No. 149. Mon. Feb. 26, 1940 — Wood Ash for Fertilizer

A few days ago we had some valuable information from the chemists of the Department of Agriculture about fertilizers, a subject that is of vast importance at this time when so many plans are being made to speed up production to meet the exigencies of war. Here is some more that may be helpful, before the winter's ashes are otherwise disposed of.

Approximately 10,000,000 cords of fuel wood are cut and burned in Canada every year, and a great deal of the ashes are thrown away, although they have a definite agricultural value as fertilizer.

At the outbreak of war in September, 1939, the prospect for adequate potash supply for fertilizer purposes was none too encouraging as it was thought that European supplies would be cut off, and United States production was not supplying Canada to any great extent. However, the situation in this respect has since changed very much, the prospect now being good for a continued and ample supply.

The production of potash in the United States has been stepped up to a point believed to be sufficient to meet the requirements of the North American continent, and, in addition to this, production interests in France have announced that an ample supply to Canada for this year is assured. As a matter of fact, large quantities of French potash are now in Canada, so that any fear of potash shortage in the immediate future would appear unwarranted, and farmers may continue to buy their potash requirements for fertilizer purposes as before the war.

---

No. 150. Tues. Feb. 27, 1940 — Warble Fly Menace

Warble flies do damage to beef and dairy cattle in Canada annually to the extent of millions of dollars. Warble flies are on the rampage from coast to coast, wherever live stock is raised. Grave losses to farmers are caused through the spoiling of hides by the holes made by the grubs, through injury to cattle from fright and worry when the flies are buzzing around, and through consequent reduction in milk production and wastage of beef. In recent years warble fly damage has been considerably reduced in some districts by systematic control measures, including timely application of derris washes to the backs of the animals.

On sunny days in spring and summer, warble flies lay their eggs, attaching them to the hairs on the legs and lower parts of the cattle. The buzz of the flies is sufficient to cause panic among the animals so that they run wildly about the fields. The small grubs hatch from the eggs in from three to seven days, penetrate the skin, and migrate through the tissues of the animal, in some cases congregating in numbers in the region of the gullet. They remain there during the summer until late winter when they commence a second migration and come to rest under the skin of the back which they perforate to make breathing holes. In about two months they squeeze their way through these holes and drop to the ground in the shape of hard, black, seed-like objects about three-quarters of an inch long, from which a new generation of flies emerge in from one to two months to mate at once and repeat the egg-laying process. The total period from egg to egg requires about a year, and at least nine months are passed as a grub in the bodies of the cattle.

When the grubs are under the skin of the back of the animals is the time for the farmer to act. This period may be from January to June. If the grubs are destroyed

before they leave the animal, no warble flies will emerge, for dead grubs provide no flies. Four or five treatments of a standardized derris wash have proved effective for this purpose. The first application should be made in early spring when the grub swelling first becomes conspicuous. This would be about mid-February in the interior of British Columbia and the third week in March in the Prairie Provinces and Eastern Canada. The second and third applications should be made at 28-day intervals after the first, and the fourth application 35 days after the third. Provided every cattle owner in the area uses the wash in the proper manner, the warble fly menace will be largely reduced or eliminated in the district. The treatments, however, should be repeated each year to maintain satisfactory control.

Derris, which forms the active ingredient of the control mixture, contains an insecticide, known as rotenone, and is derived from the roots of certain species of tropical plants. Originally it was used by the Polynesians to poison the tips of their arrows and also to catch fish.

---

No. 151. Wed. Feb. 23, 1940 -- A Bit of Ski History

Discovery of a pair of axe-hewn skis in the ruins of a railway construction cabin near Castle Mountain in Banff National Park, Alberta, indicates that skiing was introduced to the Canadian Rockies more than half a century ago. A search of early records to explain the existence of the skis reveals that Swedish and Norwegian workmen, employed in the construction of the first transcontinental railway, disdained the use of Canadian snowshoes and made for themselves the skis on which they had learned at home to travel so swiftly and surely. The ancient skis now hold a place of honour in the ski museum of the new Mount Norquay Ski Clubhouse.

The workmen who fashioned the skis were evidently skilled axemen, as the skis, even to the prows, were hand-hewn from a pine tree. For boot-plates and extra strength and thickness, an additional piece of wood was nailed to each ski. Evidently no camber or harness was used, but on the boot plate of one ski is a felt sole which indicates that the skier nailed the soles of his woodman's felt boots to the skis. The heel of the boot was left free, allowing the freedom of action provided now by modern ski harness.

In recent years Banff National Park has become the centre of championship skiing activities, and with the 1940 Dominion Ski Championships to be held on the Mount Norquay ski grounds beginning tomorrow, skiers from all parts of the continent are gathered at Banff. The Mount Norquay location is ideal for competitive skiing, having right at the camp, within five miles of Banff townsite, facilities for every sort of event. These include a spectacular downhill course, a class A jump from which leaps of more than 200 feet have been made, a cross-country course and three separate slopes all suitable for slalom.

The Canadian production of skis, that is the wooden part, is valued at over \$200,000 a year, which indicates how great is the use of skis nowadays, when only a few years ago the snowshoe was the chief equipment for out-of-doors winter sportdom, and skis were very little known.

---



No. 152. Thurs. Feb. 29, 1940 -- Leap Year

Leap year is the name given to each year which contains 366 days. Every four years we have to have a Leap Year.

The astronomers of Julius Caesar, in the year 46 before the birth of Christ, settled the solar year at 365 days and six hours. These hours at the end of four years had accumulated to 24 hours, one day exactly, and the day was added to the fourth year. Today is February 29, and there won't be another February 29 until 1944.

The name Leap Year is an English conception of what actually occurs, for after February 29 a date "leaps over" a day of the week.

Regarding the ancient custom for women to woo during Leap Year, no acceptable explanation has been found, but the custom is very old. The earliest record we have of it is in Scotland. In 1288, when Margaret of Norway was Queen of that country, a law was enacted as follows:

"It is statut and ordaint that during the rein of hir maist blissit Megeste, for ilk yeare knowne as lepe yeare, ilk mayden ladye of bothe highe and lowe estait shall hae liberte to bespeke ye man she likes, albeit he refuses to taik hir to be his lawful wyfe, he shall be mulcted in ye sum ane pundis or less, as his estait may be; except and awis gif he can make it appeare that he is betrothit ane ither woman he then shall be free."

A few years later a law similar to the Scots law was passed in France, the ancient ally and friend of the Scots. In the 15th century the custom was legalized in Genoa and Florence.

---

Note:

The January 19 "Fact a Day" told of the loss of two warships in Lake Superior during the First Great War. They were trawlers which were to be used in war service by the French Government, for which the ships were built.

After leaving Port Arthur on completion, they were never heard of again.

---







STATISTICS CANADA LIBRARY  
BIBLIOTHEQUE STATISTIQUE CANADA



1010690932