

**Commission of Conservation  
CANADA**

SEN CLIFFORD SIMON, K.C.M.G.  
Chairman  
JAMES WHITE  
Assistant to Chairman and Deputy  
Head

CONSERVATION is published the first of each month. Its object is the dissemination of information relative to the natural resources of Canada, their development and proper conservation, and the publication of timely articles on town-planning and public health.

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**FARM TO FAMILY**

Two dollars and forty cents was the price paid for a bag of potatoes by a Kingston lady, according to a recent press report. One of the potatoes had a card attached signed by the farmer who grew them, which said: "I sold at \$1.00; what did you pay?" Here again we are faced with the ubiquitous middleman, concerning whose elimination much ink has been shed. Now there are middlemen and middlemen, which is to say that some middlemen are necessary and some are not, and the best way to find out whether a given middleman is necessary or not is to try to get along without him.

The farmer and the city householder are generally supposed to be the worst victims of the middleman and, if the victimizing can be lessened in this case, there should be some hope in others. Here is a suggestion looking toward the accomplishment of that end. Let the newspapers in the larger centres of population feature a "Farm to Family" section in their condensed want ad. page. This would carry advertisements of farmers who had produce to sell to the city consumer and also advertisements of the consumer who wanted to buy from the farmer. To get the movement started, a half-price rate might be offered and the new departure should be well advertised in the news columns of the paper.

The advertising manager having the courage to make this venture would gain considerable fame for his paper and would also prove conclusively whether the farmer and the consumer really do want to get rid of the middleman.—M.J.P.

Canada burns 30,000,000 tons of coal every year, of which 60 per cent comes from the United States. The consumption may be accounted for approximately as follows:—Manufacture of coke, 2,000,000 tons; railway locomotives, 9,000,000 tons; collieries, 1,000,000 tons; bunkering ships, 1,000,000 tons; domestic heating, 5,000,000 tons; industrial heating, 6,000,000 tons; and industrial power, 6,000,000 tons.

**HEAVY WASTE IN  
LOBSTER CANNING**

The lobster industry as now conducted utilizes only 20 per cent of the raw material it handles, a Nova Scotia authority on lobster canning estimates. An average season's pack of 160,000 cases requires 25,500,000 lbs. of lobsters, of which only 6,500,000 lbs. go into the cans. The remainder is wasted, although it could be converted into a valuable by-product.

**Co-operative Fire  
Prevention in Quebec**

What the Associations Are Accomplishing

Co-operative forest fire protection has proved remarkably successful in Quebec. Four associations are now in existence, patrolling an area of more than 44,000,000 acres of licensed and unlicensed Crown lands and Crown granted lands. About 80 per cent of the licensed Crown land is represented in the membership of these associations. A considerable additional area is included within the boundaries of the respective associations, the owners of which have not yet seen fit to acquire membership.

The season of 1917 saw relatively little damage by fire to the forests of Quebec, due, in part, to favourable weather conditions, but largely to the efficiency of the patrol system. Only 453 fires are reported, burning over 16,488 acres, of which only a small percentage was merchantable timber, mostly on privately-owned land. The total expenditures by the four associations for patrol, supervision, fire-fighting, and permanent improvements, was \$137,093.

The regulation of settlers' clearing fires under the permit system has again proved highly successful. More than 5,000 burning permits were issued by the association rangers. Practically no damage was done by clearing fires set under permit. In a few cases, however, fires were set without permit, causing some damage. In a number of such cases, convicts were secured in the local courts. The settlers, as a rule, are co-operating heartily in reducing the fire loss, and the number of violations of the permit law is decreasing steadily from year to year.—C.L.

**WHAT THE PLOUGH  
IS SUPPOSED TO DO**

Aside from crumbling the soil, the chief objects of ploughing are to destroy wild plants so that cultivated ones may take their place; and to bury trash, manure, stubble and potato vines. A plough that does not accomplish these things is faulty. All refuse should be completely covered so that it will not be brought to the surface by the harrow. To bury weeds, clover or other tall green manure crops, a chain should be used, one end attached to the plough beam, the other to the double tree, thus allowing the loop to pull the tall plants down into the furrow to be covered. The jointer or skim-coultter is little used in many districts. Many farmers do not even know what it is. When manure, stubble or grass is to be turned under, it is a very useful attachment. It skims a shallow furrow slice and deposits it in the bottom of the furrow, where it is covered by the main furrow slice and will rot more readily. When stubble or grass is ploughed without a jointer, there is likely to be a line of it between the furrows, which interferes with the harrow or begins to grow and cause trouble. This is a common sight, but could, and should, be overcome by the use of the jointer. The implement dealers of the country could perform a distinct service to agriculture by encouraging the general use of jointers on ploughs. There should be one on every farm.

It is well to have various types of ploughs for the various kinds of land to be ploughed. This costs more, but greater efficiency results. A sod plough will not do good work in soft stubble lands, nor will a stubble plough perform well in stiff sod.—From "Handbook for Farmers," published by the Commission of Conservation.

The Advisory Council for Scientific and Industrial Research of Great Britain has made special grants for the purpose of research into the questions of the use of better methods of heating and improvement in the ventilation of dwelling rooms, and of atmospheric pollution, the causes for producing it, its results on public health, buildings, etc., and the value of various means of counteracting it.

**Old Railway Ties  
For Next Winter**

Investigation Shows Most Available Willing to Make Them Available

It is none too soon to take thought as to the means for keeping warm next winter. Lack of foresight in the matter of securing fuel caused much loss, suffering and inconvenience during the winter just passed, and it would be bordering on the criminal to repeat the blunder. From the nature of the situation, there can be no assurance of an adequate supply of coal coming from the United States. At the same time, the mines of Nova Scotia are facing a probable falling off in production for this year, coupled with a marked increase in consumption in the Maritime Provinces, Ontario and a portion of Quebec should, therefore, seek out every available substitute.

One possible substitute that is capable of more general utilization is worn-out railway ties. In many instances in the past, these old ties have been piled in heaps along the right-of-ways and burned. In the average year, the New York Central railroad destroys 1,750,000 old ties, an amount estimated to be the equivalent of 30,000 tons of coal. The N. Y. C. company has given instructions that all old ties be made available for fuel and it is obvious that the release of such an amount of wood will be a very important addition to the fuel supplies of the area traversed by their lines.

With a view to ascertaining what is being done with such materials in Canada, the Commission of Conservation recently communicated with the officials of a number of the leading Canadian railways. Replies from the Toronto, Hamilton and Buffalo, Quebec, Montreal and Southern, Quebec Central, Michigan Central, Grand Trunk Pacific, Grand Trunk, Dominion Atlantic, Canadian Pacific, Canadian Government and the Canadian Northern railways demonstrate that the former practice of burning ties on the right-of-ways has been stopped and that the employees of the companies and others living near the lines are allowed to remove old ties for fuel, under certain necessary restrictions.

Certain factors, such as the question of expense in collecting the ties and the scarcity of labour, must be taken into consideration in any attempt to extend the use of old ties for fuel. But a solution can be found for these and other kindred difficulties and the railways have indicated their willingness to co-operate to the fullest extent.—A.D.

Human reconstruction is one of the major tasks imposed by participation in the war.

FOREST PROTECTION ASSOCIATIONS IN QUEBEC, SEASON OF 1917

Name of Association	Area patrolled	Amount expended	Number of fires	Acreage burned	Settlers' permits issued
Ottawa River—					
Eastern division..	8,446,400	\$22,004	108	8,871	1,181
Western division..	12,521,120	42,753	28	607	..
St. Maurice.....	9,049,645	32,564	217	4,341	1,406
Laurentian.....	7,586,344	20,541	52	2,340	..
So. St. Lawrence—					
Western division..	2,672,989	6,883	5	9	700
Eastern division..	4,089,511	11,748	48	320	1,952
Totals.....	44,366,009	\$137,093	453	16,488	5,239