

Conservation

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Overcoming the High Charges for Heating

Possibilities of Central Heating Plants Should be Thoroughly Investigated

The annual coal consumption in Canada for domestic purposes is nearly 7,000,000 tons which, if we allow a cost of \$15 per ton, represents a yearly expenditure of some \$105,000,000. With increasing population and the gradual extension of settlement northerly, this consumption will naturally increase; any effort, therefore, having for its object a substantial reduction in our domestic heating bill, is worthy of public attention.

The hope of relief, entertained by some, through electric heating from our water-powers, has been definitely shattered by the fact that, outside of the question of cost, the demand would far exceed the supply available. For instance, in Quebec and Ontario, alone, assuming a population of some 5,000,000, a total of probably not less than 10,000,000 h.p.—and costing from \$150,000,000 to \$200,000,000 per annum—would be required to supply electrical heat. The power available within the more thickly populated portion of these two provinces, even including Canada's equity in the great possibilities of the St. Lawrence and Niagara rivers—the greatest water-power rivers in the world—only amounts to about 5½ million horse power.

The possibilities and economic efficiency of central heating plants appear particularly applicable to Canadian conditions or to any country with long winters. Due to the initial cost of the underground distribution piping system, the plants usually involve heavy overhead expenses; when the plant is used intensively and during long periods each year, the charges can be spread over longer periods than would be the case for systems only used during shorter periods, as in certain localities in the United States. Another economy would result from the possibility of using the cheaper grades of coal, instead of the expensive anthracite now commonly used in Eastern Canada. Suitable boilers with automatic stokers and smoke-consumers would overcome some of the present disabilities in the use of the inferior fuels.—L. G. Denis.

Our National Wastes

WEEDS

It is impossible to estimate even approximately the loss caused by weeds to Canadian agriculture. A bulletin recently published in the United States estimates the annual loss due to weeds in that country at more than \$300,000,000. Not long ago a western paper stated that the annual loss to farmers of Saskatchewan due to weeds was not less than \$25,000,000. If there is this loss in one province, the total in all Canada must be tremendous. There are many districts in the Dominion that stand high in weed production.

Weeds cause a direct, actual money loss such as those due to drought, hail or frost. There is also a loss in depreciation of property badly infested with weeds.

We do not know the full reason why weeds reduce crop yields, but it is well known that weeds deprive crops of moisture, plant food and sunlight, which cause decreased yields. A crop of grain or grass and clover seed which contains weed seeds will not grade No. 1, and there are certain weed seeds which it is well nigh impossible to screen out. Every time a sample of grain or grass seed drops a grade the price is lowered.

Weeds cause much extra work. They must be handled a number of times in a grain crop, and extra ploughing and cultivating are necessary in a weed-infested field if a crop is to be obtained. Net profits are reduced because of increased cost of production and of cheapened product. In a sense, farming is a war on weeds. This warfare must be unremitting and relentless if the farmer is to emerge victorious. Many men make a start to clear their farms of weeds but quit too soon. The campaign is stopped when success is in sight. The plan of attack must be carefully made and faithfully carried out. Every farmer should be his own weed inspector and his own weed eradicator.

Lack of careful planning with reference to weeds is too frequently evident throughout Canada. One man puts in a short or systematic rotation of crops; still others fail to give the land sufficient preparation for their crop, or sow seed that is foul with weed seeds. It is because these things have not been given sufficient consideration in the past that the evil conditions of to-day prevail. The weed problem is one of national concern and calls for active co-operation on a large scale. Every member of the community is affected and should lend assistance. Farmers, weed inspectors, owners of vacant property, township and county councils, and governments must work together if weeds are to be held in check.

The problem is how to get rid of weeds and keep them out. First, follow a short rotation of crops; cultivate the land thoroughly and often; prevent weeds going to seed; clean all seed before it is sown.

If the grain field is weedy, seed it heavily to clover and grass; mow the annuals and biennials before they seed, and pasture closely to keep down perennials; follow by a hoed crop or smother crop and most varieties of weeds will be checked.—F. C. Nunnick.

For Future Canadians

A country with forests,—and no country is more richly blessed in this regard than Canada,—has a distinct obligation to see that these forests are conserved so that future generations shall not seriously lack one of the most important contributions to culture and comfort. Finland can teach us a good lesson in the proper care of the forests. Finland, like Canada, must depend in a large measure on the product of the forest to main-

tain and improve her economic status. To neglect this source of wealth is to invite national bankruptcy. It is most astonishing to us that Canadians have so largely failed to realize the absolute necessity for a proper forest policy for the whole Dominion.—*Pulp and Paper Magazine.*

From 510 salmon, taken in nets between 2nd June and 5th August, 2,800,000 eggs were secured and placed in hatchery at Tadoussac, Quebec.

Business Interests Heavy Fire Losers

Charged with Greater Portion of Fire Waste—Need for Enforcement of Drastring Legislation

Canada closed the year 1920 with a fire loss of approximately \$27,400,000, equal to \$3.42 per capita on an eight million population, or \$17.10 per family—a new record, and one worthy of much thought.

An analysis of this fire loss discloses certain facts which are not creditable to the business life of the country, and which account, in part, for our high cost of protection in Canada, as compared with Europe. One-half of the fire waste was due to 72 fires, practically all in commercial property. Fires causing damage of \$10,000 and over numbered 301, and these again were largely in business property.

A question which every business man should study is, "Why these fires?"

Are we more interested in what we earn than in the means by which we earn it?

Are we so intently watching sales that we cannot devote sufficient attention to the plants which make the sales possible?

True, the average business man carries insurance, but this is charged up to cost of production, and the people pay the insurance. Is it fair to the public, however, to charge more insurance cost than necessary owing to failure to protect the plant from fire?

With modern methods of fire protection available, no business man should be permitted to increase unnecessarily the cost of living through neglect or carelessness in eliminating fire dangers. Section five of the Criminal Code as amended says: "Every one is guilty of an indictable offence, and liable to two years imprisonment, who by negligence causes any fire which occasions loss of life or loss of property." The rigid enforcement of this section would probably do more to reduce the fire waste than any other influence which might be brought to bear.

Maskakee lake, Sask., is being developed for epsom salts, glauber salts, magnesium carbonate, sodium chloride and potassium salts. The evaporating plant will produce from 25 to 30 tons of salts every 24 hours.

The Annual Meeting of the Commission of Conservation will be held at Ottawa, February 23, 24, 25, 1921