Conservation

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Sowing Good Clean Seed Pays in Results

Net Profits from Same Area Increase by Planting only Best Seed

Increasing the acreage of crops grown on the farm does not always mean greater net profits. The latter, per acre, are very frequently quite small. If the yield, per acre, can be increased without raising the cost of production the increase in yield will all go towards increasing the net profits. Let us assume, that a farmer's wheat crop yields 24 bushels per acre, and that it takes 20 of the 24 bushels per acre to pay rent or interest on capital invested, and the cost of preparing the land, seed, harvesting, threshing, etc. This would leave 4 bushels from each acre as the net profit.

On a large proportion of Canadian farms uncleaned or improperly cleaned seed is sown. There is no excuse for sowing so much dirty and poorly graded seed. The fanning and grading can be done in the slack time and well ahead of the busy spring seeding. This grading would not add to the cost of production of the crop and the larger yield secured would substantially increase or, in many instances, double the net profit. Experiments conducted with oats at Guelph over a period of seven years showed the following results:

Large seed.....62 bush per acre
Medium seed...54 " "
Small seed.....47 " "

Similar experiments with wheat, barley, rye and peas gave much the same results in each case. The small, shrunken and split kernels are much more valuable for feed than for seed. Another great advantage obtained by fanning and grading the grain for seed is that weed seeds are cleaned out. One way to prevent having weedy crops is to sow seed grain free from weed seeds. One weed seed sown may mean thousands of weed seeds produced in the next crop. Many of our worst weeds produce thousands of seeds per plant.—*F. C. Nunnick.*

What is supposed to be the saltiest lake in the world is at Senlac, Sask. Its salt content runs from 53 to 55 per cent, as compared with 10.7 for Salt lake in Utah. The lake covers an area of 185 acres, but is only 18 inches deep. It is, however, fed by living salt springs, and its level is thus maintained.

OUR NATIONAL WASTES

Fire Losses and Cost of Protection

One of Canada's most inexcusable wastes, a waste which at the same time removes not only the product of our natural resources, but the result of human effort both of brain and hand, is the fire loss of life and of property.

When it is definitely known that at least 85 per cent of the total of this loss is due to no other cause than carelessness, it should shame the self-respecting Canadian into giving much thought to ways and means for overcoming this defect in our national life.

During the past ten years, 1911-1920, Canada's fire waste, from destruction of property alone, has been almost $230,000,000, as follows:—

1911....	$21,459,575	1916....	$20,487,509
1912....	21,083,819	1917....	20,086,085
1913....	23,305,408	1918....	31,815,844
1914....	21,583,118	1919....	23,207,647
1915....	19,022,332	1920....	27,800,000

The above value has been entirely destroyed; there is nothing to show for it.

To guard against fire loss, in one form only, that of insurance, the insurance companies collected in premiums approximately $311,506,000, out of which they returned in payment to policy holders for losses approximately $161,100,000.

During the year 1920, Canada's fire loss in property destroyed amounted to $27,800,000, in addition to which approximately $26,000,000 was paid in insurance premiums over and above the amount returned to policy holders.

But this is not all. Interest and upkeep of waterworks for fire protection represents an annual expenditure of $6,200,000, while to provide fire protection by fire departments, including interest on capital invested in equipment, maintenance, etc., calls for $7,640,000 annually.

Private fire protection, which is a rapidly growing form of insurance against fire loss, entails an annual cost, principally upon business interests, of $6,350,000.

With this total of $73,990,000 as the 1920 cost of fires and protection, the lack of interest by the general public in fire prevention is amazing. With an estimated population of 8,000,000, Canada is paying a tax of $9.25 per capita, or on an average family of five, $46.50. This tax is collected in various ways, being included in the cost of food, clothing, amusements, etc. But no matter how it is paid, it is inescapable.

Last year Ontario spent $6,664,989 on the construction of public highways. This created general public interest, and was a highly commendable work. But, last year, Ontario's fire loss, covering 9,221 fires, was $10,883,000, and yet so little interest was taken in this heavy fire waste that it hardly received a second thought. During the recent municipal election in a large Ontario city, one of the leading questions discussed was the addition of a number of firemen to the fire department, but, strange to relate, not once was the matter of collective effort at fire prevention suggested.

A particularly regrettable feature of the fire record of this country is the loss of life. During the same ten year period as above, over 2,500 lives have been lost by fire. Last year 224 lives were lost in this way, and practically no amelioration of this condition is in sight.

Only one method to overcome public apathy on the subject of our fire waste appears to promise results, namely, personal responsibility for fires and sufficiently aggressive and reliable officials to see that the laws are enforced.

Cost of Inefficiency in the Use of Coal

Losses of By-products and Damage from Smoke Due to Use of Bituminous Coal in Raw State.

What Canada wastes through the use of raw bituminous coal for heating and power purposes may be estimated from a statement by Mr. Joseph E. Pogue, industrial economist, New York, on behalf of the committee of the American Society of Mechanical Engineers, which has been enquiring into fuel conditions in the United States. Mr. Pogue states that the waste occasioned by the firing of raw bituminous coal in that country, including the loss of by-products and damage by smoke, might be represented by an assessment of $150 for each and every family in the United States. In 1905 Hon. F. A. Rollo Russell estimated the damage from smoke in London, England, at $26,000,000 per annum, of which amount $10,750,000 represented extra washing and wear and tear of linens.

Raw bituminous coal is burned in factories and locomotives, also in some homes, and dense black columns of smoke are allowed to contaminate the atmosphere and besmear the surrounding areas with soot and grime, damaging health and property. The value of the benzol, tar, ammonia and gas which are lost through the burning of the raw coal, is enormous.

The Commission of Conservation has always been a strong advocate of the establishment of central coking plants near large centres of population, where a market would be available for the gas for cooking and heating. "As a domestic fuel and for all ordinary industrial

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Fire loss and fire protection cost Canada $73,990,000 during 1920, subdivided as above.