

Commission of Conservation

CANADA

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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 the proper conservation of the same, together with timely articles covering town-planning and public health.

The newspaper edition of CONSERVATION is printed on one side of the paper only, for convenience in clipping for reproduction.

OTTAWA, AUGUST, 1916

POTASH IN WOOD ASHES AND FELDSPAR

Hardwood ashes contain from 18 to 46 per cent of potash, while ashes from conifers contain from 14 to 20 per cent. The yield of ashes from wood is about 1.6 per cent in weight and one cord of wood weighs approximately 2,100 lbs. Assuming that four-fifths of the potash in the ashes is leachable, the amount of potash recoverable from one ton of wood containing 15 per cent of potash is four pounds.

The present price of potash in the centres in the United States is nominal. The rate per ton is quoted at from \$400 to \$500, but none is available. The price for the most common form, the muriate, or chloride, containing 80 per cent of the pure salt (equivalent to 52.7 per cent of K₂O) was \$38 per long ton in July, 1914.

Canada possesses many deposits of feldspar with potash contents ranging as high as 15 per cent, thus constituting a considerable resource of potash if an economical process of extracting it can be developed.

Several chemists are actively engaged upon this problem in the United States. Chemically it has been solved, but capital is still hesitant about investing heavily in any of the dozen promising methods which have been worked out on a scale little beyond simple laboratory experimentation.—W.J.D.

The process of re-breathing air that has already been used, if long continued, leads to asphyxiation and death. Much of the so-called "delicacy," susceptibility to cold, languor, headache and nervous depression are due to the same cause. Sir Morrell Mackenzie.

Fires Caused by Sportsmen

Careless Responsible for Heavy Losses—This Year

In addition to the more common causes of fire, carelessness on the part of fishermen has been responsible for serious losses, several destructive fires in Canada having originated in this manner during the current year. In April, a large malling plant in Manitoba was destroyed with a loss of \$300,000, due to embers blown from fishermen's fires. Serious forest fires were raging in New Brunswick during the latter part of May, and it is definitely known that at least two of the fires originated as a result of neglect on the part of fishermen.

Care with fire should be one of the first considerations of any hunting or fishing party. Protection from wind is a simple matter when it is necessary to have a fire, and, when it has served its purpose, it should be thoroughly extinguished. In the woods the ground should be scraped clear of all leaves and other combustible matter for a space large enough to prevent the fire spreading. When leaving a fire, it should be thoroughly drenched with water to assure its being extinguished. Trampling a fire out is never positive, as a high wind fans into life again embers which may have been simply trampled into the ground.

When the results of carelessness are brought to their attention, it is surely incumbent upon our sportsmen to give proper attention and care to their camp fires, and relieve Canada of this unnecessary fire loss.

Grain for Seed Purposes

Too Many Varieties Grown on Canadian Farms

When selecting a variety of wheat or oats to sow on their farms, many farmers seem determined to obtain something different from that which their neighbours are sowing. This idea is entirely wrong when it comes to choosing a variety of grain for seed purposes. While visiting 100 farms in Waterloo county in 1915, the Commission of Conservation found that 28 varieties of oats were being sown, and 16 varieties of wheat. In Northumberland county 18 varieties, and in Carleton county 19 varieties of oats were found. Previous surveys disclosed similar conditions in other provinces. Many farmers are suffering a distinct loss by not sowing proper varieties. The most suitable variety for any of the farms visited in 1915 by the Commission may be found among

the first two or three at the top of the list of those tested at the Central Experimental Farm, Ottawa, or at the O.A.C., Guelph.

Sow a variety which has been tested and tried, and which has given good results for years, and if your neighbour is sowing the same variety it will be so much the better—for him.

Do not try every new variety that is brought to your attention by beautiful illustrations in seed catalogues or by the persuasion of agents. The testing is being done for you at the institutions for that purpose and the information you want in this connection can be had free by writing to your nearest Dominion Experimental Farm or to the Central Experimental Farm, Ottawa, or to your nearest agricultural college.—F.C.N.

Boy Scouts and Forestry

Changes Made to Suit Canadian Conditions

To meet Canadian conditions, the Dominion Council of the Boy Scouts' Association has authorized a Forestry badge, in lieu of the Woodman badge. The conditions under which this badge may be secured by the boys are very comprehensive and will do much to interest Canadian boys in the Canadian forests and the wild life found therein. The conditions for passing the test are:

1. The scout must—
1. Identify the principal native tree species in own locality, and explain their principal distinguishing characteristics.
2. Identify five kinds of shrubs.
3. Describe the principal uses of ten species of Canadian woods. Visit a wood-using factory, if practicable.
4. Explain the aim of forestry, and compare with agriculture and unregulated lumbering.
5. Tell what are the effects of fires on soil, young forest growth and mature timber; principal causes of forest fires and how best to overcome them; three general classes of forest fires, and how to fight each.
6. Describe how the forest lands are protected and administered in own province.
7. Describe the general features of a lumbering or pulpwood operation; how the cutting is done in the woods; method of transportation to the mill, and of manufacture there. Visit some portion of woods operation, or saw-mill, or pulp or paper mill, if practicable.
8. (Optional). Discuss one or more of the enemies of trees, such as insects (leaf-eaters, bark-borers, wood-borers), or decay (fungus diseases), and tell something of how damage from these sources may be lessened or overcome.

Briquetting Coke Breeze

Valuable Supplement to Ordinary Furnace Fuel thus Obtained

In the *Journal für Gasbeleuchtung*, Behr describes experiments made during the past six years in the briquetting of coke breeze. The best results were obtained by compressing the breeze, after the addition of finely divided hard pitch, and heating the mass to 300 degs.—400 degs. Cent. Experiments with other binding media, such as both thin and thick tar, with an addition of sawdust and coal dust—all failed in respect of ease of ignition. With regard to the uses of the briquettes, a small size, 2½ by 2½ inches, may be used in all cases where the layer of fuel is not less than 8 to 10 inches. Good chimney draught is obviously desirable, i.e., such as is required for ordinary 2-inch coke. The best results, however, are obtained in closed iron stoves, central heating plants, etc., in which from 50 to 100 per cent of the fuel ordinarily used can be replaced by coke briquettes. When the coke briquettes first were introduced they did not give great satisfaction, but these were a large size, 4 inches in diameter, and not so hard as the later briquettes. After the small 2½-inch briquettes had been introduced, many householders regarded them with favour, and now at times the output does not meet the demand. The result of the introduction of the briquetting plant at Kolberg has been not only to dispose entirely of coke breeze produced on the works, but it has been brought from other plants to manufacture into briquettes.—W.J.D.

REVENUE FROM CROWN TIMBER LANDS

Since Confederation, in 1867, Quebec has derived a total direct revenue to the provincial treasury of more than \$40,000,000 from the sale of cutting privileges on Crown timber lands. The revenue from this one source now averages well over \$1,500,000 annually. The area of Crown land under license to cut timber is approximately 44,500,000 acres, while 78,000,000 acres remain unlicensed. About 6,000,000 acres of timber land in the province are in private ownership.—C.L.

Don't hang electric light cords on nails. The insulation soon wears off and exposes the live wire. A short circuit therefrom might start a fire.

The secret of good ventilation is to renew the air in a room at least three times each hour, day and night, without creating a draught.