

volatiles. One pound of wood waste will yield a quarter of a pound of charcoal, containing seventy-five per cent of the total heat units of the wood from which it is derived. In the mill burner, all the heat is wasted. If charcoal were made instead, seventy-five per cent of this heat would be recovered. Over a thousand tons a day of smokeless fuel with a third more heat value than coal! Why not?

A much discussed project is the manufacture of alcohol for motor fuel from this waste. Here, let me correct a common error. Wood alcohol is made by heating wood in a closed retort. It is not this variety of alcohol that is proposed to replace gasoline, but ethyl (grain) alcohol, which is made on a large scale in Europe by chemically treating wood with acid, forming the sugar glucose, which is then fermented by yeast and distilled. The product, which is of the portable kind, must be denatured before it can be used in motor cars. The cost of production is above fifty cents per gallon, the yield being ten gallons per ton of sawdust. The cost must be reduced to allow of development on this coast, and this can best be accomplished by chemical research, by which the yield might be trebled.

Turning now to a struggling industry on this coast, the treating of fish offal and dogfish. The fish is cooked by steam, the meal is separated and dried and the liquid containing the oil is allowed to settle. There is a loss of oil in two ways. The meal after drying, carries upwards of ten per cent of oil, which is really a detriment to the meal. Furthermore the liquid after the separation of the oil will be found to carry a quantity of oil which is emulsified with the water, owing to the presence of a substance called lecithin. The water also contains gelatin, which is lost with the emulsified oil when the liquid is run to waste as it invariably is.

Chemical engineering research is required to devise means to save the oil in the meal, and that in the water as well as to recover the glue.

"Lastly, I will cite an old problem of the mining industry. This province has large deposits of ore containing silver, lead and zinc, in the form of sulphides. Many millions of dollars are locked up in ore of this class, for which there is no profitable market. This is not the fault of the smelter, but is due to the lack of a readily applicable economical process for recovering the values of the three metals. The problem is not peculiar to British Columbia.

I am glad to be able to state here that the Advisory Research Council is giving this problem its attention and has made a grant of money for the purpose of commencing work with a view to finding a process suitable for treating this ore. This work will be carried on in Vancouver.

In conclusion I will state that the problems I have spoken of are beyond the province of individual accomplishment and can best be solved by a large organization or a co-operation of interests.

PROVINCIAL AGRICULTURE IN A YEAR OF PROGRESS.

(Continued From Page Six.)

On land settlement, the report says:

Many new settlers have secured locations along the Grand Trunk Pacific Railway in Central British Columbia, and many more will follow. These consist largely of pioneer farmers from the Prairie Provinces who have sold their farms at good prices owing to the increased demand for farm lands, and are attracted by the cheap and fertile lands of the Central Interior. The majority of these settlers are possessed of capital, understand the management of Prairie lands, and will make good. They are the class of settler the province needs and will greatly assist in increasing agricultural production.

In 1919 the province was visited by several eminent agricultural authorities from the United Kingdom, including

Sir John Keen, Bart., and Christopher Turnor, Esq., the latter following up the work begun by Sir Rider Haggard. Mr. Turnor farms a large acreage in England and was chairman of one of the Agricultural Committees in connection with the Greater Production Campaign in Britain during the war. Sir John Keen is prominent in agricultural circles in Ireland and is considered to be one of the leading authorities. Both gentlemen spent considerable time in the province, visited many districts, investigating potentialities from an agricultural standpoint, and were much impressed with the opportunities offered for the settlement of British ex-service men.

The Canadian Government Merchant Marine announces that it is planning to operate a joint service to Japan, China and India, and a joint arrangement with the Alfred Holt & Co. line, operating on the Pacific for a joint service to Japan, China and India.

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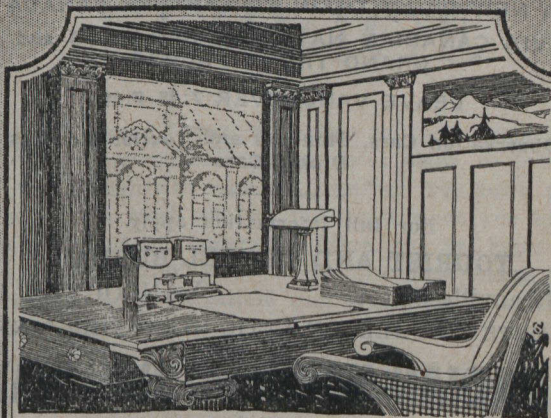
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