

one-sixth as much as we used to need in normal times—and as much as 100,000 Malay natives gather from 18,000,000 rubber trees.

The writer of this article would seem to hold no brief for grain or petroleum; but note what he says:

The process used at Institute happens to make its butadiene out of alcohol. The alcohol now comes from corn.

I am emphasizing two points. First, there does seem to be a considerable volume of synthetic rubber being manufactured in the United States from alcohol produced from grain. Second, there would appear to have been recent discoveries which reduce the cost of this process.

Mr. ROSS (Calgary East): Did Doctor Archibald give the figures at which alcohol would have to be sold in order to bring that return?

Mr. GARDINER: I have in my hand the document which was before the committee this morning when Doctor Archibald was giving his evidence. This is a survey of Canadian research on the utilization of farm products by the chemurgic committee of the Canadian chamber of commerce. It will be recalled by those who were present at the committee this morning that Doctor Archibald referred to certain reports that had been made, I think by Doctor Speakman. This document is the last word on the matter in so far as Canada is concerned. Figures are given based on cost according to United States practice and according to European practice. According to United States practice, with wheat at 60 cents the cost would be 53·4 cents for the alcohol at the plant. According to the European process, with wheat at 60 cents the cost of alcohol would be 39·6 cents at the plant. As I indicated at the beginning, after examining the figures which had been secured in the United States up to that time, as well as the experiences on the European continent, it appeared that even with wheat at 60 cents, the cost of alcohol would be 53·4 cents under the American practice and 39·6 cents under the European.

Mr. QUELCH: What is the price of alcohol to-day?

Mr. GARDINER: The price was given by the Minister of Munitions and Supply as around 27 or 28 cents.

Mr. ROSS (Calgary East): I believe the normal price before the war was 25 to 27 cents.

Mr. GARDINER: I was in Chicago last week within a few miles of the plant that has been spoken of so much by so many hon.

members. I did not have time to visit it, but Mr. Shaw, the director of marketing, was with me and I asked him to visit the plant and make a full report on what is being done. He went down there last Friday and has not yet returned. The wheat pool in Saskatchewan appointed a committee which reviewed this question thoroughly, and while I do not know that they have so far made any official report I think I am safe in saying that they questioned the advisability of attempting at this time to produce alcohol from wheat or of spending sufficient money to produce it on the information that is now available to us. That is also the opinion which we hold as a department. This, of course, is entirely apart from the question raised by members here the other day—whether we should set aside a certain sum of money to investigate the whole matter, and further whether we could not make something out of farm products that would be to the advantage of the farmer and the country. With the principle underlying that I am in entire agreement, as I think are the members of the government also.

There is, of course, the question which always arises in matters of this kind, whether we should use the present set-up under the national research council or some other set-up more closely associated with the Department of Agriculture, and further whether we should carry on experiments at the centre at Ottawa or in different parts of the country where the agricultural products are grown. All that was covered the other day, and the suggestion made on the latter point was that we should have research and experimental laboratories set up in four sections of Canada—at the coast, on the prairies, in central Canada, and in the maritimes, in regard to the products of those particular areas. That was the question that was being discussed here the other day. There was no discussion of any one particular thing, but the suggestion that many things should be inquired into.

Mr. WRIGHT: I think the minister was quoting from a report made in 1941, but since then there have been tremendous developments in the production of alcohol from wheat. I had the pleasure of going through the research laboratories in Ottawa just before Easter and of seeing some of the advances that have been made in that field. I have also read the report published by Mr. Baruch, of the United States, to the effect that if the United States went into the production of rubber they would use at least 60 per cent grain alcohol and 40 per cent alcohol from petroleum products. I certainly think this