

ask if he will consider the requests he has received to the effect that the system be changed over for the balance of the crop season, and for 1942 crop delivery. Would he change the arrangement so as to meet the suggestions which are being forwarded to him in large numbers?

Hon. J. A. MacKINNON (Minister of Trade and Commerce): Mr. Speaker, it is my usual custom to give serious, thoughtful and earnest consideration to any reasonable representations made to the Department of Trade and Commerce. I have given serious thought to the letters which have come in, and in each case I have replied, setting out the attitude of the Department of Trade and Commerce at the present time. I do not think there is anything further I can add to that at the moment.

### SUPPLY

The house in committee of supply, Mr. Bradette in the chair.

#### DEPARTMENT OF AGRICULTURE

Experimental farm service.

12. Experimental farms administration, \$59,480.

Mr. QUELCH: Would the Minister of Agriculture throw a little light on this question of alcohol from wheat? A statement was made in the house by the Minister of Munitions and Supply that in the manufacture of alcohol from wheat returns to farmers would be around only 25 to 35 cents a bushel. On the other hand, Doctor Archibald, speaking to the committee on agriculture yesterday, said that if alcohol were made from wheat, given a wheat yield of twenty bushels to the acre, the farmer would get a return of \$17 an acre, which works out to 85 cents a bushel. That is different from the figure given by the Minister of Munitions and Supply; I suggest there must be some explanation for the difference between 25 or 30 cents on the one hand and 85 cents on the other. Will the minister give the committee some information on this point?

Hon. J. G. GARDINER (Minister of Agriculture): Of course one would require to have the figures used by both the parties referred to, and also the basis for those figures, before he could explain the difference between them. The difference which might be there is probably based upon the facts that are usually run into when you are discussing costs of productions or returns per acre. The statement made to the committee by Doctor Archibald, which I happen to have in my hand, contains the estimated value of various crops as sources of alcohol. Wheat is taken at twenty bushels to the acre, and the production of alcohol is stated to be

[Mr. Perley.]

4.24 gallons per hundred pounds. Taking that as a basis it goes on to say that the total value of the crop per acre is \$17.51. I am not certain what figures were used by those who worked out the cost for the Minister of Munitions and Supply, but in all probability the average production and the average cost were taken into consideration. The only statement with regard to the matter that I would care to make at the present time is that all the information I have seen, all the figures that have been compiled, indicate that wheat would have to be produced at a much lower cost than that at which I think any farmer in western Canada would be prepared to produce it, in order to permit the production of alcohol at a cost comparable with the cost of production from other sources.

Mr. KNOWLES: I should like to direct the attention of the minister to an article appearing in *Business Week* of June 12, 1943. I quote from pages 72 and 75 as follows:

The chemurgist's dream of grain alcohol as the answer to farm surpluses may yet come true—and with it a lengthening horizon of post-war possibilities for the rubber, oil, and chemical industries—through a process of protein extraction which promises to make alcohol a cheap by-product.

And again:

The process was discovered less than four months ago by Irvin W. Tucker, a young chemist in the department of agriculture working under direction of Doctor A. K. Balls, chief of the department's enzyme research laboratory. Park and Tilford developed it commercially.

The article goes into further details and concludes as follows:

Heretofore, chemurgists who grappled with the question of farm surpluses habitually stubbed their toes on two hard problems: there was no market for the tremendous volume of alcohol that could be produced from farm products, and the cost of farm alcohol was prohibitively high. The war has solved the first problem. . . . Balls and Tucker appear to have solved the second.

This article would seem to suggest that a process has been discovered which considerably reduces the cost of making alcohol from grain, a matter which is of prime importance to Canada. I should like to know whether there is contact between the Department of Agriculture and research such as is here indicated.

I should also like to draw the attention of the minister to an article which appeared in the June, 1943, issue of the *Reader's Digest*. This is a condensation from the *Christian Science Monitor*. I quote from pages 81, 82 and 83 as follows:

At Institute, West Virginia, a superb plant 77 acres in area is turning out rubber at the rate of 90,000 long tons a year. That is almost