

Mr. GARDINER: The different costs might be best illustrated by giving a complete record of the crops investigated. This is a table showing the return per acre from different crops:

	Return per acre
Artichokes	\$70 73
Sugar beets	75 73
Potatoes	48 78
Corn	36 42
Barley	30 10
Wheat	17 51

It will be noted that the returns per acre range from \$75.73 for sugar beets down to \$17.51 for wheat. I believe these figures indicate the commodities from which alcohol might best be produced.

Mr. BLACKMORE: What yield per acre of potatoes was used in making this computation?

Mr. GARDINER: A yield of 250 bushels.

Mr. BLACKMORE: That is a small yield.

Mr. KNOWLES: A few moments ago the minister drew a distinction between war-time and post-war conditions, and I believe that distinction was well taken. He suggested that the conditions under which we produce commodities while a war is on are different economically from the conditions prevailing in peace time, and that it is quite possible that there are some things we are producing to-day which in peace time could not be produced economically. I suggest however he should realize that hon. members, and particularly those of us from western Canada who are pressing this matter, have both war-time and post-war periods in mind. We feel that a contribution to the war may be made by a further investigation into the possibilities of producing synthetic rubber from alcohol derived from grain, and, as other hon. members have pointed out, such as the hon. member for Calgary West, we are deeply concerned about the position of western agriculture, and agriculture throughout Canada, after the war is over. We are anxious that there shall be no depressing of the standard of living of our people on the farms. We feel it will not be possible to induce people to go back to the farms, if I may use that expression, from war industry and the armed services, simply by making speeches about the glories of farm life and all that sort of thing. We have to revolutionize agriculture and the possibility of its providing a really good life for the people who participate in it. I agree with the hon. member for Wetaskiwin, that there is much that needs to be done to turn the requirements of the people for food into effective economic

demand. But it appears that even after we have done that, there will still be surpluses of agricultural products; and unless we find other uses for them the people who will suffer will be the farmers. We urge that the Minister of Agriculture and his department approach aggressively this matter of further investigation.

Mr. GRAHAM: I shall take only a few moments to add my voice particularly to what was said by the hon. members for Calgary West and Moose Jaw in connection with the support to be given to research work for the improvement of agricultural products and their use for industrial purposes. I am in complete accord with the statements made by those two hon. members and some others.

There is only one point I should like to make quite clear, and that is that the success of such a project would not be in the interests of agriculture only; industry would benefit very greatly if such a programme produced the results expected. Natural resources such as petroleum, coal and iron are wasting deposits on the north American continent. We see that illustrated particularly in respect of iron, petroleum and many other products of the mines. It would provide a useful contribution in the way of supply for our industrialists if out of the earth an annual crop could be produced to furnish substitutes for materials that are now gradually used up.

The hon. member for Moose Jaw mentioned a figure of \$500,000. I think he set that figure arbitrarily in order to give point to his argument that research work should be carried on in this connection. I do not think any particular amount is involved in the expression of opinion that is coming from this committee. The men of the national research council who have given some thought to this matter point out that any research work of value is a matter of careful planning over a number of years. Research work involves a great number of failures, the elimination of what cannot be done in order to find out what can be done. I think this committee would feel like urging upon the minister that an amount be provided from the treasury, whether it be under \$500,000 or over \$500,000, in order that these objectives may be reached. I hope the minister will give effect to the almost unanimous opinion of this committee that such a plan should be put into operation, and that the scientists of this country be given an opportunity to contribute to our future welfare, as they have done to such a large degree in the past. A by-product, as it were, of this particular work, our young chemists and physicists would be kept in Canada. As a matter of course these men in the past have found employment in the