

That is the background that sets us up, we think, to speak on this subject of land use.

We have followed with great interest the previous meetings of your committee. I am very happy that the name of the committee has been "Land Use". We have talked in previous years about soil conservation, but I do not think that is a correct term. If you want to have soil conservation, I suppose the best way to do it is to put the soil back into grass or trees, but we don't want to do that; we want to use the soil.

Senator HAWKINS: But you are using the soil when you put it into trees. Don't go overboard on that, or you may get into trouble.

Dr. RIPLEY: Yes, you are quite right Senator Hawkins, but we want to use it for more than grass and trees.

A year ago I was asked to prepare a paper for the British Commonwealth Bureau of Nutrition, in Aberdeen, Scotland, for publication in their bulletin *Nutrition Abstracts and Reviews*.

We did not have time to prepare a special brief today, but I think the points that are raised in this brief are quite pertinent to the terms of reference of your committee. Therefore, I am going to refer to a few of the highlights of the brief.

I would first refer to page 291 where in the first paragraph I say that we have some 2,461 million acres of area in Canada, the second largest country in the world. Of this large area almost 172 million acres are covered by water of lakes and rivers and the total land area is 2,289 million acres. Approximately 7 per cent, or 174 million acres, is at present occupied farm land, which includes improved farm land and unbroken rangeland. Only 97 million acres, or 4 per cent of the total land area, is improved or cultivated land. Under an expanded economy it might be conceivable that another 50 million acres could be brought into cultivation. That would still provide a potential of only 224 million acres of agricultural land, which would be only about 10 per cent of the total land area.

I think that is very significant when we think about land use in Canada. It is most important that we use the rather small amount of agricultural land satisfactorily and carefully. That is the point that brings out the importance of the land use study.

I have two things in mind: we are speaking today largely from the standpoint of production, not so much from economics. We think from the production standpoint that climate and soils are the two most important factors, at least as it affects our Canadian production.

I have put in there a paragraph on temperatures, precipitation and sunshine. Those are tremendously variable in a country like Canada, as it is not necessary to remind you. This gives some of the great variations that do occur because of climate.

In the next few paragraphs on page 293 we have in a way related climate to soils.

Dr. Leahey was, I think, the first witness before this committee, back in its early days, and he told you something about our soil conservation work, and the classification of our soils. If you will refer to the map opposite page 294 you will see that it is divided into a number of soils and climatic areas. The area to the left that is cross-hatched is the British Columbia area; that deals with the soils in British Columbia, the high rainfall area, fairly fertile soils because of the river valleys. The rainfall there is high in winter and rather low in summer; in fact, the Okanagan Valley has the lowest rainfall of any place in Canada. Then we move over to the central region in the northern part of Alberta, and into the Northwest Territories. We have the large area of grey wooded soils occupying about 150 million acres. The