

precipitation there is higher than farther south in the central region, being approximately 15 to 17 inches per year. The soils are not especially fertile but in some places they can be quite productive.

In the next area, down in the criss-cross section, is the great fertile black soil area, which occupies 45 million acres. It is a lot of land. It is the richest soil on earth, I think. I do not believe there is any better soil any place in the world than this black soil in around Lacombe and up through Melfort and in that area. The precipitation there is a little less than in the grey wooded soil area, 15 to 16 inches. Then there is the dark brown soil area, which was produced under grass, the prairie soils. Incidentally, the black soil area was too. In this dark brown soil area of 30 million acres, the precipitation decreases as you go south, running from 18 to 10 inches. Then in the lower area, in the little triangle at the very bottom, we have the brown soil area. The precipitation there runs from 6 to 12 inches. Those are all very fertile soils and have a very high lime content. We do not need any lime in that area, As a matter of fact, some are too alkaline and too salty to produce crops, and we are doing some work in that connection. That is the western part of Canada.

Then we have two or three narrow, small areas in the eastern part. We have the clay belt in northern Ontario and Quebec. It is that long oval area just above Lake Superior and Lake Huron. It stretches over to Quebec, and then there is the small area from Lake St. John to the St. Lawrence River. Then down in the south peninsula by Lake Ontario, Lake Erie and Lake Huron, we find one of the most productive areas in Canada. There is production of a large variety of crops. They produce many of the cash crops: canning crops, corn for grain, soya beans and fall wheat. A large amount of our cattle and poultry production is found in that area. A little farther east we come to the Montreal-Ottawa area, and it is getting into a less fertile area. The climate is less desirable there too. It is cooler and it is almost out of the corn grain area. Some of the soils are quite acid and need lime. Farther east again, in New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland, we have our great areas of podzolic soils. There is a high precipitation and it is ideal for the growing of such crops as potatoes and grass. The climate, with the high precipitation, favours the production of these two crops, and others as well. That is a general picture of the soil and climate conditions in the various areas.

I would like to refer you to page 295, table 1.

Senator TAYLOR (*Westmorland*): How do you classify the marsh soils of the Maritimes?

Dr. RIPLEY: Well, the marsh soils, of course, are a very special soil, a fertile soil. There are about 82,000 acres of those marsh soils, and they are very fertile. However, they require lime and superphosphates, we have found. We have quite a set of experiments at Nappan Experimental Station, Nova Scotia. These are very good areas for the production of grain and hay, and that is what they have been used for, mostly for hay, actually, but I think now with the work that the Maritime marshland people are doing they will be used for other purposes, too. Actually, they are among our fertile soils.

Senator TAYLOR (*Westmorland*): For pasture and other crops?

Dr. RIPLEY: Yes.

Senator TAYLOR (*Westmorland*): On one particular farm I visited a couple of years ago, the owner was in his nineties, and he said that he could recall that 75 years ago a certain area of his marsh area was, and still is, producing 3 tons of hay per acre.