of crop land in summer-fallow than any other country in the world. Fifty years ago less than 20 per cent of the land of the Prairie provinces was summer-fallowed; now more than one-third of the land lies idle every year in summer-fallow. It increased in Manitoba from 12 per cent in 1915 to 30 per cent at the present time.

Some summer-fallow is necessary in the drier parts of the Prairie provinces, where it requires two years of moisture for the production of one crop. But much more land is being summer-fallowed than is warranted by moisture considerations.

The greatest single disadvantage of summer-fallow, other than that it takes the land out of production, is that it produces soil drifting by leaving the land bare and vulnerable to the wind. Incidentally, it costs us $126 million a year to summer-fallow this land. The overwhelming loss to agriculture from soil drifting during the 1930's is well known to all. The situation in the past two decades has been more favourable; it has been characterized by higher rainfall and less wind, and consequently soil drifting has not been a major problem. However, it has come up a little during the past two or three years.

In 1958 there has been more serious soil drifting than we have had on the Prairies since 1938. There was serious drifting in Manitoba in 1955. It is evident from a number of experimental farms that the acreage of summer-fallow could be reduced, and the total crop production thereby increased. The alternate crop system, where you have summer-fallow one year and wheat the next, gives a higher yield than if you grow wheat year after year, or under any other arrangement.

Senator HAWKINS: Would you clarify that for me, please?

Dr. HILL: The highest yield of wheat you get is in the year following summer-fallow.

Senator HAWKINS: But that is two crops.

Dr. HILL: That is the point I am trying to make: when you consider the total acreage required in producing crops, you get a higher yield if you do not summer-fallow every other year. This applies to large portions of the Prairies: Manitoba, western Alberta near the foothills, and northern and central Saskatchewan, where moisture is higher; areas where now the alternate crop and summer-fallow seems to be pretty well in vogue.

In southwestern Saskatchewan and southeastern Alberta, in the heart of the dry area known as the Palliser triangle, the alternate crop system is pretty much required, although there are seasons when you get more wheat if you do not summer-fallow that often.

Farmers have adopted an alternate system of crop and fallow not necessarily because it is more profitable, but because it is a little easier to manage. Economics have entered into it again: if you can't sell the wheat, why grow more of it just to put in storage? It is easier to have a straight alternate system, of cropping half the land and fallowing half. It is not so much trouble to get the crop in; when you get it in, you do the summer-fallow two or three times over; when you are through with that you do the harvesting; every time you go over an acre with a combine you get 30 bushels or 25 bushels, whereas you have to go over, about two acres stubble crops to get that much. It is an expeditious arrangement more than an economic arrangement in the Prairie provinces.

I think it is true to say that the recommended practices for the control of wind erosion are not being followed on a large percentage of farms. The basis of these recommendations was worked out by agriculture scientists during the thirties, and involve preservation of crop residue on the surface