

that are rust-resistant? Or has success been met with in other directions?

Mr. MOTHERWELL: The invasions of the rust disease originate as a rule near the gulf and work north at about the same rate as the season, and there is no possible way of protecting the wheat from these spore attacks. These spores travel in the atmosphere four or five miles an hour against prevailing air currents, and the only way to offset their effects is to breed a plant that will sufficiently resist them. As there are all sorts of germ diseases against which the human body is immune only through the development of resistance, so in plant life we have to breed a type that will resist these attacks.

Mr. MILLAR: The minister said just now that more had been discovered in the last ten years or so in this matter than had ever been known previously. Can he give in concise form some of the discoveries that have been made recently, with particular reference to the cause of rust?

Mr. MOTHERWELL: I presume the hon member refers as well to the progress that has been made in combating this menace. We know that Kota wheat resists about ninety per cent of the forty different varieties of rust; in other words, we have a wheat that will resist thirty-six different varieties of this disease. Now, if we can develop the characteristics that are essential to good wheat, such as early maturity, quality, and prolific growth, together with a sufficiently sturdy straw, we shall have a splendid variety of wheat in this particular species. But this has not been demonstrated; it may take ten or fifteen years, and no man can venture to predict anything in this connection because there are so many sides to the question. For example, it is only within recent years that the discovery has been made that there are different species of rust, and since then to some extent experimenters have had to double back and start over again with that knowledge in view. Once you know your enemy and are familiar with his characteristics and his peculiarities you have made one great step in the direction of getting the better of him. And as I say, it is only within recent times that we have known of the existence of rust in different forms; formerly it was thought that there was only one variety of rust.

Mr. CALDWELL: Do the inspection and the certifying of seed potatoes come under this vote?

Mr. MOTHERWELL: Yes.
[Mr. Millar.]

Mr. CALDWELL: Has there been any complaint in regard to the physical grading of certified seed potatoes from the Maritime provinces?

Mr. MOTHERWELL: As regards classification, size and so forth?

Mr. CALDWELL: I am referring to size, shape and that sort of thing.

Mr. MOTHERWELL: Yes. While in the Maritime provinces last summer I had a conference with the potato growers' organization and there was some criticism of the fact that potatoes that were too large and those under two inches were excluded.

Mr. CALDWELL: That is not the complaint I am referring to. Let me give a concrete illustration of my meaning. A man in my riding, who lives quite near me, had somewhere in the neighbourhood of forty acres of potatoes, and he secured over four thousand barrels off this forty-acre field. They were inspected in the field, found practically free from disease and they were so certified. They were also certified as being all of one variety. That is told by the blossom on the potatoes while they are growing, or, at least, that is one of the indications. It is much harder to detect a difference of variety in the bin than it is in the field. There is a much better chance to check up any other varieties in a field of growing potatoes; there is not so good an opportunity in the bin. When however, this man came to market his potatoes—and it is one of the requirements in order to get a certification of the potatoes that they shall be graded under the supervision of one of the officials of the department—he was somewhat surprised, after having been grading for nearly a whole afternoon, with his own crew of four or five men and the inspector supervising the work, to find that only a few barrels of seed had been passed as certified. Although they were all of one variety and free from disease, if there was any little difference of shape, they were taken out. They had to be all of exactly one shape, and anyone who grows potatoes knows that such grading is an impossibility. This man said that he would not have had more than two or three carloads out of four thousand barrels, and he objected to having them graded under this inspection. He, therefore, had to forfeit his certificate of freedom from disease or that the potatoes were all of one variety. I do not know whether the minister has had any complaint of this kind or not, because this is only a recent occurrence.

Mr. MOTHERWELL: No.