

what was being done to control the corn borer he said that once you get it in a silo it is all right. But people can put their corn in a silo without paying government officials. Would the minister tell us how many officials will be paid out of this item?

Mr. MOTHERWELL: I understand there are about forty.

Mr. SUTHERLAND: If there are forty officials engaged on the administration of the act, what uses up the balance of the item? I think this information might be given in detail. It would facilitate the passing of the item and eliminate a good deal of the discussion.

Mr. MOTHERWELL: Outside of the vote for live stock, the great bulk of the estimates for agriculture is for educational purposes, disseminating information throughout the country; for instance, under this item, information with respect to insect and fungus pests. There is only one medium through which we can do that work, apart from bulletins, and that is through men and women, and therefore a large amount is set aside for salaries. It is through this medium that the information is disseminated throughout the country. We have altogether something like forty or fifty inspectional services. You cannot disseminate this information by radio or long distance telephone; it has to be done through appointments, and, of course, through bulletins. If there is any other way of doing it, I do not know what it is.

Mr. GOULD: Reverting again to the question of rust, I was very much interested in the information the minister gave to the committee, and in his remarks as to the manner in which the spores may be carried against a current of wind. As the minister was speaking, I recollected reading a pamphlet issued by the state of South Dakota dealing with rust in wheat. In that pamphlet is described an experiment that was carried on by the state, in one township which was suggested. The barberry bush I believe is held to be the main source if not the genesis of the rust spore. The first step in this experiment was to destroy all the barberry bushes in the segregated area. Then it was sown with wheat. One particular township where the barberry bush was known to exist was also sown with wheat without destroying the barberry bush. The result showed a return of \$12,000 more in that segregated area where the barberry bush had been destroyed. I do not know whether the barberry bush is, scientifically speaking, indigenous to our western country, and I wondered if the

[Mr. Sutherland.]

department has found out whether our rust comes from this bush, or whether it is carried through the air by wind from the southern states where the bush is found.

Mr. MOTHERWELL: The barberry bush is not thought to be the real source of rust, although there is no doubt whatever that you would have more rust in the immediate vicinity of barberry bushes. It acts as host between the two periods of the rust, and as a result you may have more rust in an area where there are barberry bushes than elsewhere. This discovery about the barberry bush was made over a hundred years ago in Europe; they have been aware of it in France and other parts of Europe for a very long time. They just knew it happened that way, but they had not worked out the real philosophy of the thing. Consequently, they started to destroy the barberry bushes believing that somehow or other they had something to do with rust. While that theory has been confirmed in later years, the barberry bush is now thought to be a source of contagion only to a very limited extent. I know that in the western provinces, in Manitoba, as well as in Ontario, they have issued instructions from the agricultural college to have these bushes exterminated because conditions have got so bad. While they did not think it was the chief source of contagion, they thought they would take no chances, and so they ordered the destruction of the barberry bush. Most authorities do not now consider it to be the chief source of contagion. I can recall as a youth that we had rust in Ontario, when winter wheat used to be a more general crop than it is now. All we knew then was that we had a sort of weather called rusty weather, with intermittent sunshine and showers, murky, calm weather, which seemed to develop rust. We know now that there are forty different varieties of rust, and when you have beaten out thirty-nine varieties, you have still one left to conquer. That is what makes this problem so difficult. It requires a good deal of patient attention because it may take several years to evolve a solution.

Mr. WARNER: Has the department any definite information, or any opinion even, as to whether rust would be carried over from one year to another in the seed, or whether it can live over in the land? Would it help any to put some other crop in the land after rust had been on the ground?

Mr. MOTHERWELL: Rust is not carried by the seed nor in the land. It may be carried over by some grasses. If a disease