By Mr. Lucas:

Q. Do climatic conditions play an important part in the development of rust?—A. Undoubtedly. Generally speaking, any condition that retards maturity in grain in responsible for severe injury due to rust if such is prevalent, that is to say, weather or any other conditions that will enable the plant to continue strong luxuriant growth until late in the season, are bound to expose such wheat to very serious loss from rust infection.

By Honourable Mr. Motherwell:

Q. In 1916 in many parts of Saskatchewan the outbreak of rust was preceded by dry weather, and the crops appeared to be in a dangerous condition from lack of moisture. Will that affect the resistance of the plant?—A. The condition which you describe should have favoured escape from rust.

Q. By hastening maturity?—A. Yes.

Q. But it had not reached that stage?—A. Was not the dry period followed by rain? Had the drought persisted, the grain would have matured without serious loss from rust, though the yield might have been light. The wet period, however, gave the wheat another lease of life, it started again to make vigorous growth, which delayed maturity and exposed it thus to the severe attack from rust.

Q. In Mr. McConica's district it was a race between rust and the wheat, but around Qu'Appelle and in the southern part too, the rust got far advanced, but I have noticed two or three times that when you have a very severe drought, say, the wheat is about shooting out, it seems to weaken it down and increase the disposition to be affected by rust.

Mr. SALES: That has not been my experience. The close weather, the humid weather, when you can scarcely breathe, that is the time it is on.

Hon. Mr. MOTHERWELL: Murky, no sunshine, and clouding.

Mr. SALES: Your theory is that it weakens.

Hon. Mr. MOTHERWELL: It lowers the resistance.

WITNESS: As a matter of fact, any period of drought checks the development of the grain for as long as it lasts. Growth is simply at a standstill. It does not make any further progress for a time. If the weather changes, becomes moist and murky, the wheat will rapidly resume its growth, and so does the rust fungus, with the result that infection becomes severe. Once the grain has passed the milky stage, losses from rust attacks are rarely serious. If we could have a good wheat maturing several weeks earlier than at the present time, we would not need to bother about rust at all, under our usual conditions.

By Mr. Forrester:

Q. Is not the condition of the plant itself one of the causes that will catch rust?—A. The immunity investigations to which I referred just now, would indicate that there is pronounced resistance in individual wheat varieties. It is, if I may say so, the constitution of certain varieties that enables them to escape from rust. It is an inherent physiological resistance.

By Mr. Pritchard:

Q. How is it that the wheat was dead with rust around Winnipeg, when out at Indian Head it was not touched?

Hon. Mr. MOTHERWELL: I have the idea that the epidemic comes to us from the south, coming from the Gulf, right down to Oklahoma, Kansas, the Dakotas, and Minnesota, striking Manitoba first. I believe I never knew Minnesota and Dakota to get the epidemic but what Manitoba got more or less of it. Going west you get less and less, but last year it went even into eastern Alberta and as the season advanced I expected it to reach the Rocky Mountains.