stem rust. When maturity is reached, which is within some ten to fourteen days after germination, these spores are able to infect all grains and grasses for miles around. The red stage spreads with extraordinary rapidity. A crop of wheat promising twenty to thirty bushels at the beginning of the week may by the end of the week become so heavily rusted that no grain may develop. Towards the close of the natural life of the wheat plant, the rust parasite once more changes its cycle by producing a new type of spore that turns the red spots black. These black spots contain thick-walled, dark brown spores, permanently fixed to the wheat stem. By that time the wheat is cut and the spores pass through the winter. Early in spring the winter spores begin to germinate and produce a secondary, exceedingly minute, colourless spore that must fall upon the leaves of a barberry. It cannot germinate on wheat or on grasses, but must have a barberry leaf to continue its life cycle. There it germinates and gives rise to the cluster cup described above. Without the intervention of the barberry, black stem rust cannot exist, as shown by the experiences in many countries.

Q. You might have one barberry plant in Manitoba to cover the whole province?—A. That is the case. Inasmuch as this single barberry gives rise to rust on grain in its immediate surroundings, from which the red summer spores will spread, according to favourable conditions, over the entire province. And yet people are not enthusiastic in eradicating their barberry bushes. We have met often with very drastic repudiations of our endeavours. Some absolutely refuse to take out their barberries.

By Mr. Sales:

Q. Have you got the names and addresses of the people who refused to take them out?—A. Yes, they are known to us, principally city people, who are not interested.

The witness retired.

The Committee adjourned.