Grain rust investigational work is construed to include, in the first place, all technical phases, and secondly, the vast amount of experimental work arising out of such technical investigations.

This technical work, as it concerns the entire Experimental Farms system, is carried on by a specific section, viz. plant pathology, of the Dominion Experimental Farms, while the experimental and field work is conducted in co-operation with a number of the Branch Experimental Farms, viz., in Saskatchewan at Rosthern, Scott, and Indian Head; in Alberta at Lacombe, and in Manitoba at Morden and Brandon.

In addition to these localities the work is further carried on in co-operation with the University of Saskatchewan, Saskatoon; the Manitoba Agricultural College, Winnipeg, and the School of Agriculture, Vermilion, Alberta.

It would be erroneous to conclude from the above review, that our work is quite as intensive as it may appear extensive. Our present facilities do not enable us to attend to one-half of the work in the manner in which it requires attention. The following table shows the value of the principal grain crops of Canada, together with a most conservative estimate of the annual losses due to the principal grain diseases, and will give an idea of the importance of the whole problem, as well as of the extreme inadequacy of facilities at our disposal to contribute materially to the solution of these important problems:—

COMPARISON OF VALUE OF PRINCIPAL GRAIN CROPS OF CANADA, WITH ESTIMATED ANNUAL LOSSES.

Value of grain crops		Losses	Value
Wheat	$340,000,000	15%	$ 51,000,000
Oats	198,000,000	10%	19,800,000
Barley	34,000,000	8%	2,700,000
Rye	21,000,000	6%	1,200,000
Total	$593,000,000	Annual Total	$ 94,700,000

The grain disease research work, including the time and energy spent on rust research especially, is in charge of an officer of the rank of plant pathologist at a salary range of $2,400 to $2,760, who is located at Saskatoon, where he is provided by the University of Saskatchewan with laboratory and greenhouse space. The officer in charge is assisted by one permanent assistant plant pathologist, and one stenographer in charge of correspondence and records, and during the summer by one or two temporary field men, especially engaged in barberry survey.

COST DURING 1923 OF MAINTENANCE OF LABORATORY AT SASKATOON

Salaries, permanent and temporary staff	$ 5,580 00
Travelling expenses	2,850 00
Maintenance	1,940 00
Total	$ 10,670 00

The Saskatoon laboratory directs almost the entire activities of Western grain disease investigations. It carries on a survey for the extermination of the barberry. As you know, scientific research has established, beyond a doubt, that the barberry carries and spreads the most destructive of all our rusts, viz., black stem rust. It becomes infected with the rust in spring, and from every barberry bush near a grain field the disease spreads. It gives rise to the summer or red stage on grain, which once established, spreads from plant to plant, field to field, locality to locality; this is followed in the fall by the black