and is not a constant amount, as some claim. These, then, are the more important lines of research which we hope to take up this year in addition to the regular work.

## By Mr. McMillan:

Q. Are you making any experiments to test the value of timothy or clover at different periods ?—A. We have already done much in that connection with grasses, and the general result of our work has been to show that the grass has its highest nutritive value just after the flowering period, that is as the seed is forming. If it is further allowed to mature the grass loses in food value. Our analyses indicate that the right time to cut for hay is just after the flowering period, in the majority of instances.

## By Mr. Carpenter :

Q. I would suggest that you should add to your work the question of reclaiming the worn out lands in the older provinces. We know of many such lands and you would be doing a grand work for our people if you could point out a cheap and easy method to accomplish this?—A. I shall give the question my earnest attention. I trust I have been able to show to the members of the Committee the large field of work that is open to us in these chemical investigations. What I have this morning indicated has only been an outline of what we have done and what our possibilities are in regard to this work in the future. In closing, I do not think I can do better than to recall to the minds of the Committee what I said last year regarding the need for more help in the laboratory.

"The ever-increasing demands upon our time will necessitate in the near future an enlargement of the scientific staff in the chemical division. The work has for some time past outgrown the possibilities of the present staff, which consists of myself and an expert assistant. If we are in any way to keep abreast of the work which is asked of us, it will be absolutely necessary that there should be further expert and analytical assistance in my division."

That statement is more true this year than last, and its repetition may be urged with greater emphasis than on that occasion.

Having examined the preceding transcript of my evidence, I find it correct.

FRANK T. SHUTT, Chemist, Dominion Experimental Farms.