

July 3, 1940

Dear Leiper,

I have your letter of July 2nd with enclosure from Peters, and some of his questions can be answered at once. I may say that I am not in the least too busy to attend to such things, since no official use whatever has so far been made of my Department.

Peters' questions 2 and 3 are easily answered: the three counts of worm eggs before treatment can be used very well, and will probably give a considerable increase in the precision of the comparison between the six counts after treatment. Probably the mean percentage reduction in egg numbers will not be the best measure, but that will appear from the data themselves. The same applies to the weight data (question 3) where the regression of weight on killing on weight before treatment will probably give the best comparison. The principal use of repeated weighings is to average out day to day fluctuations and to obviate gross errors.

The first question of the possibility of utilizing four additional lambs is not so easy, as I do not know in what way

administrations A, B and C differ from each other; as each is represented in Column 0 (control) it may be that all these six lambs are untreated, and therefore treated alike.

In considering how best to use additional material one must consider on what points, in the experimenter's judgment, higher precision would be best worth having, e.g., you may be very confident that column 2 will differ from column 0 in at least some of the features observed. If so it might be worth while to increase the precision of column 1, on which depends any information the experiment may give us to whether the second dose is more or less valuable than the first. Again, it may be that you feel confident of distinguishing A from B and C, but more doubtful as to whether B and C can be distinguished. I should be much influenced by this sort of consideration in allocating additional animals.

Yours sincerely,