

5th. December 1949.

Dear Dr. Gordon,

Thanks for your letter. I am glad you feel that there was something in the points I wrote about. I still feel that as regards effective control one will rely on the small number of animals strictly parallel with those used for vaccination, and that the addition to these of animals of other origin, though of course convincing if there were any doubts as to the virulence of the test dose, will not otherwise add to conviction in the validity of the experiment.

I am also a little uneasy about the programme of revaccinating older animals, when one suspects immunity has worn off or is liable to have passed the useful limit of 80% protection. I should indeed want to use all of these quickly in tests to ascertain just what percentage immunity had been achieved. Otherwise I believe your scheme ^{is sound} of testing only a few animals, and these might all be of classes one and two, at early pregnancies, and only when failure of protection has been observed, to throw in larger numbers and begin the doubly and perhaps triply vaccinated series.

This is cutting it rather fine, but we certainly will need all the accuracy that can be got from a total of 400 vaccinated. If groups of ten from numbers one and two at the first pregnancy

show twenty animals immune it would at least be sufficient to say that at this stage protection was better than 80%, and one might be content with no more at the second pregnancy. For the ^{third} ~~second~~ shot perhaps two fifteens and two tens should be tried, but one would be much influenced even by a single failure while the numbers tested are small. It would be interesting to try to work out rules for one's guidance according to the results.

Yours sincerely,