13 June 1932.

Dr. J. Glasspoole,
Royal Meteorological Society,
49 Cromwell Road,
South Kensington,

Dear Dr. Glasspoole:

Thanks for your letter and the copy of the correspondence. I think the calculations that Wishart has in mind are those set out in my paper of "The influence of rainfall on the yield of wheat at Rothamsted" Phil. Trans., B, 213, pp. 89-142, which are carried out as an annual routine in my laboratory. They take rather longer to explain than to carry out, and I am not quite sure whether they are really what you want.

For the purpose of studying the influence of weather on crops it was necessary to get some system of specifying the general character of the season, for example in respect of the amount and distribution of rainfall; by means of only a few numerical quantities. This can be done satisfactorily by using the six constants needed to specify a polynomial of the fifth degree fitted to the actual rainfall record by a rather simple process of successive summation.
There was no need for the constants to have any simply intelligible meteorological determination but merely that they should be comparable from year to year and together specify the main features of the rainfall distribution. As we are concerned with the effect of the weather on a crop there is no reason to suppose that the effect of rainfall on September 1st, before the crop is sown approximates to its effect on August 31st, when it is being harvested; specification by, let us say, the first two harmonics, would not have suited us, though it is, perhaps, worth considering whether they would not suit you better.

If you would care to talk it over and get down to details I should be very glad to see you either in town or at Rothamsted, for I am perfectly certain that amateur observers especially would find the comparison of different years by any systematic process, which takes account of the whole of the record, extremely fascinating; and only a common system is needed to make such work a genuine contribution to comparative climatology.

Yours sincerely,