INTRODUCTION.

Crop forecasting is a necessity for the economics of marketing of any crop of world-wide importance such as cotton, cacao, wheat, sugar. If these forecast figures are to be of any real value, they must obviously be fairly accurate, and also, the earlier they are obtained, the more valuable they are.

So far, data have been compiled from estimates sent in by field officers to their head office, where they are collected, totalled, and averaged. The field officers arrive at their estimate for the district by local opinion checked by personal inspection.

This method involves a great deal of time and labour without attaining accuracy, and any method by which the estimate of probable yield could be based on measurement, is preferable to one based on eye judgement alone.

The most important uncontrollable factors influencing yield are Rainfall and Temperature, leaving only Rainfall in the tropics, the Temperature factor being eliminated.

This was realised by Dr. Martin Leake working on the cotton crop in Central Provinces, and he was able to arrive at a more accurate forecast of yield, and with a fraction of the time and labour, by calculating the amount of water left in the soil at the end of the Rains, as soil moisture was the limiting factor for yield in that district.

Dr. Leake's method was as follows:-

Daily rainfall records were taken at the various centres of cotton growing areas, and a constant amount deducted for loss by run off, percolation, transpiration and evaporation. This constant was taken as 5% for that area. The remaining 95% was carried forward and added to the next days rainfall, and 5% of that total deducted and the remaining 95% carried forward in the same way as before, and so on till the end of the wet season. The final figure was used as the basis for the forecast, considering it in comparison with figures obtained in previous seasons, but with the necessary re-adjustments for the incidence of disease, date of sowing, etc.