Beena Kuter, Giridih (E.I.R.) - India

9th October 1938

Dear Professor Fisher,

I got from Professor Mahlanobis, a copy of your recently published tables yesterday, and find that in 'balanced incomplete blocks' you have added 2 new solutions viz ~~no 19 and no 23~~. But no 19 ($\lambda = k = 9$, $b = v = 19$, $\lambda = 4$) and no 23 ($\lambda = k = 9$, $b = v = 37$, $\lambda = 8$) But before in table XVIII before the possible solutions $\lambda = 9$, $v = 28$, $b = 36$, $k = 7$, there appears a blank. This solution can however be obtained directly from that of no 23, given by the series 1, 7, 9, 10, 12, 16, 26, 33, 34 (mod 37). We have simply to cut out the any one block (say the first), and from the other blocks to cut out the varieties belonging to this block. We are then left with 36 blocks of 7 plots each, containing 28 varieties each replicated 9 times. The relation between the two solutions is analogous to the relation between two types of orthogonal series. Similar relation exists between many pairs of solutions in the table. The solution of no 19 you have presumably got from the series (1, 4, 5, 6, 7, 9, 11, 16, mod 19). I would be grateful to know whether you have since obtained any new solutions, together with a hint of the method. I will be remaining here till the end of October, after which I shall return to Calcutta. With my best compliments

Yours truly
Raj Chandra Bose.