

57. A first study of sampling experiments on the effect of systematic arrangements in field trials.

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Olof Tedin has recently shown (*Jour. Agri. Sc.*, Vol XXI, Part II) that systematic arrangements in a 5×5 Latin Square has a small but significant effect on the residual error. In the present paper it is suggested that this effect is due to the occurrence of patches of greater or less fertility which affect a few adjoining plots (and thus produce a small correlation between their yield) but are not large enough to extend uninterruptedly over appreciable portions of the field as a whole. Sampling experiments have been devised and made to test this possibility, and a preliminary report of experiments on a 5×5 Latin Square arrangement is submitted in this paper.