

JOHN INNES HORTICULTURAL INSTITUTION

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7th December 1942.

Dear Professor,

Thanks for reading my Nature m.s. and for the comments. I will certainly amend my reference to the theory of dominance along the lines you suggest.

Enclosed is a completed, though of course not necessarily final, version of our paper. I have done a summary, the reference list and the figure. I give the reference to the chromosome number. So far as I know there is no published evidence on the chromosomes at meiosis, but ~~that~~ Darlington's remarks are probably based on the fact that a woman did look at it here some 6 or 7 years ago; she did not make much of a job of it, but I expect Darlington saw it and came to the conclusion that a more competent person could. I have not referred to East on the subject; he is most likely wrong.

I have kept off a detailed discussion of polysomic inheritance and confined myself to the question of the optical test distinguishing it from disomic inheritance. The reasons are (i) that polysomic inheritance one requires a lengthy discussion if details are to be given and that in any case, I have done it in some detail six years ago, (ii) there is great ignorance in this (and I expect in others) country about how to show that inheritance is polysomic. I have run across more than one case of people who had the data but did not know how to use them for this purpose. Hence I thought that a pointed discussion of this would be worth while. If you think I am wrong in keeping this section in its present very simple form, I will have another go at it.

I have amended the text slightly in a few places to try and make the sections run on a little more smoothly.

The experts here think that the

a gardener ought to be able to manage 500 Lythrums on a plot about 1 rod in area, in about 20 hours during the year. They do not claim that this estimate is highly accurate, or that it is based on accurate figures of what our gardeners do, but they say that it seems like a reasonable time to them. I could deal with the seed collection and scoring each year if we could get a plot at Down. It would be a most interesting experiment.

Yours sincerely,

*K. Walker*