

13th. March, 1929.

A.D. Buchanan Smith, Esq., M.A.,  
Animal Breeding Research Department,  
King's Buildings,  
West Mains Road,  
Edinburgh.

Dear Buchanan Smith,

I do not seem to have a copy of my last letter to you.  
I think the point is this; p cows give yields

$$x_1, x_2, \dots, x_p$$

Then

$$\frac{\begin{matrix} (x_1 - x_2)^2 + (x_1 - x_3)^2 + \dots + (x_1 - x_p)^2 \\ + (x_2 - x_3)^2 + \dots + (x_2 - x_p)^2 \\ \dots \dots \dots \\ + (x_{p-1} - x_p)^2 \end{matrix}}{pS(x^2) - S^2(x)}$$

$$pS(x^2) - S^2(x)$$

where  $S(x^2) = x_1^2 + x_2^2 + \dots + x_p^2$   
 $S(x) = x_1 + x_2 + \dots + x_p$

I hope this tallies with what I said before. If not  
send it all back and I will sort it out.

I should classify the relationships according to the  
probability of showing X or A chromosomes, before pooling them,  
this may simplify the work in the way you want.

Yours sincerely,