Broadback Rainfall

Annual variance less for complete artificial than for no N.

Is it a pain deduction shot?

1) Effectiveness of N is greater for small crops than for large, if so can you give me regression, correlation coefficient or other numerical value?

2) Seeing that rainfall is prejudicial to yield is effectiveness of N greater in wet than in dry years, if so can you give me regression equation or other value?
Sir John.

I should infer only that many of the causes of year to year variation on plot 5 had less than proportional effects on plot 7, though perhaps greater absolute effects. The most striking group of causes in this way would be those concerned with the availability of natural sources of nitrogen; these would be expected to have absolutely less effect on plot 7 than on plot 5.

Other causes, e.g. causes affecting the availability of a complementary nutrient, would certainly have greater proportional effects on plot 7 than on plot 5. This is obvious on comparing the phosphate with the no phosphate plots on Hoos, and suggests, in conjunction with the Broadbalk evidence, that year to year changes in the availability of natural nitrogen are considerable.

Up to the end of October before sowing, plot 5 suffers absolutely more from rain than plot 7, and for about a fortnight more it suffers proportionately more. From then to the end of March the proportionate (and still more the absolute) loss is greater on plot 7. Thereafter the proportionate loss is less on plot 7, though practically the same through August, and only absolutely less for about 5 weeks in May and early June.

For a year wet for the first 26 months, or dry from mid-November to the end of April, or wet after that, nitrogen is more effective proportionately; in the wet condition it is less effective.

8 December 1932.

R.A.F.