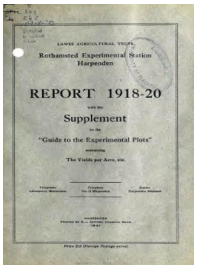
Report 1918-20 With the Supplement to the Guide to the Experimental Plots Containing the Yields per Acre Etc.



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Chemical Department - Rain VIII

Rothamsted Research

Rothamsted Research (1921) *Chemical Department - Rain VIII ;* Report 1918-20 With The Supplement To The Guide To The Experimental Plots Containing The Yields Per Acre Etc., pp 34 - 34 **- DOI: https://doi.org/10.23637/ERADOC-1-109**

the falling off is more marked, exceeding that of the unmanured crop. The figures are :—

Plot.	Manure.	Mean yield Bushels per acre.	Mean annual decrement Bushels per acre.	Mean annual decrement %
3 & 4	None . . .	12.27 ± .39	.097	.79 ± .16
2b.	Farmyard manure .	34.55 ± .74	.031	.09 ± .11
8	Complete artificials (treble ammonia)	35.69 ± .93	.092	.26 ± .14
7	Do. (doubleammonia)	31.37 ± .90	.144	.46 ± .15
6	Do. (single ammonia)	27.58 ± .71	.141	.62 ± .19

INCOMPLETE ARTIFICIALS.

Plot.	Manure.	Mean yield in Bushels per acre.	Mean annual decrement. Bushels per acre.	Mean annual decrement. %
12	Sulphate of soda .	28.32 ± .98	.181	.64 ± .18
13	Sulphate of potash .	30.21 ± .91	.123	.41 ± .16
14	Sulphate of magnesia	27.76 ± .90	.231	.83 ± .17
7	All three sulphates .	31.37 ± .90	.144	.46 ± .15
11	None of the sulphates	22.05 ± .91	.219	.99 ± .21

The existence of the third type of variation precluded the possibility of obtaining true curves of exhaustion.

The paper contains a detailed analysis of the mathematical methods employed for the deduction of statistically homogenous material for the further study of meteorological effects.

RAIN.

VIII. E. J. Russell and E. H. Richards. "*The Amount and Composition of Rain falling at Rothamsted.*" (Based on analyses made by the late Norman H. J. Miller.) Journal of Agricultural Science, 1919. Vol. VIII. pp. 309-337.

The ammoniacal nitrogen in the Rothamsted rain-water amounts on an average to 0.405 parts per million, corresponding to 2.64lb. per acre per annum. The yearly fluctuations in lb. per acre follow the rainfall fairly closely. The monthly fluctuations also move in the same direction as the rain, but the general level is highest during May, June, July and August, and lowest during January, February, March and April.

The nitric nitrogen is on an average one-half the ammoniacal, *viz.*, 1.33lb. per acre per annum. The amounts fluctuated year

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