ROTHAMSTED RESEARCH

Yields of the Field Experiments 1948

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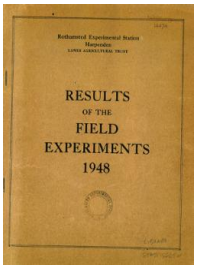

48/CA/2 Wheat - Residual Organics

Rothamsted Research

Rothamsted Research (1949) *48/CA/2 Wheat - Residual Organics ;* Yields Of The Field Experiments 1948, pp 62 - 64

WHEAT

Residual effects of various dungs, of additional straw to dungs, of rotted bracken and of straw with sulphate of ammonia added.

RW – Great Harpenden II 1948

System of replication: The design was intended to be a 5 x 5 lattice square in 3 replicates, but owing to the interchange of a pair of treatments in two of the three blocks, the lattice design was not attained, and it was impracticable to treat the experiment as other than 3 randomized blocks of 25 plots.

Area of each plot: 0.0171 acre.

Treatments: Applied in 1947 to potatoes.
Of the 25 plots in each replicate, 3 received no organic manures, and the remaining 22 were treated with the following organic manures, applied at two rates: rotted bracken (B) straw with sulphate of ammonia added (A), and nine dungs:- from boxes:- stored (2 months) made with normal and heavy litter (W and X); from straw bale yards:- fresh, made with normal and heavy litter (Y and Z), stored (12 months), made with normal and heavy litter (R and S) and fresh (low ration and low ration plus sulphate of ammonia to straw) (T and V); from sunken yards:- stored (12 months) commercial dung (L).

Rates of application: The commercial dung (L) and rotted bracken (B) at 8 and 16 tons per acre, the straw with sulphate of ammonia (A) at 2 and 4 tons of chaffed straw per acre plus 0.3 and 0.6 N per acre as sulphate of ammonia, the stored normal dung from boxes (W) at the equivalent of 8 and 16 tons per acre weighed before storing, dung X, Y, Z , R and S, at weights produced by the same quantity of feeding stuffs as 8 and 16 tons of fresh normal dung from bullock boxes, and dungs T and V at the same rates as Z.

Actual rates of application
Tons per acre

Dungs		Level 1	Level 2	Litter straw lbs/head/day
	W	5.37	10.74	9.0
	X	4.79	9.58	18.0
	Y	8.66	17.32	9.2
	Z	10.78	21.55	17.1
	R	6.79	13.57	9.8
	S	7.76	15.51	19.7
	TV	10.78	21.55	16.1

Basal Manuring: 2 cwt. Sulphate of Ammonia per acre

Cultivations etc: Ploughed: Oct. 31 – Nov. 4. Rolled and springtine harrowed: Nov. 4 and again Nov. 5. Seed drilled: Nov. 6. Harrowed in: Nov. 7. Ring rolled: Apr. 23. Sulphate of ammonia drilled: early May. Cut and shocked: Aug. 10–12. Reset shocks: Aug. 18. Raked and carted in: Aug. 19–20. Threshed Sept. 6–10. Variety: Bersee. Previous crop: Potatoes.

Standard error per plot: Grain 2.52 cwt. per acre or 5.75% (50d.f.)

Organic Manure	Grain: cwt. per acre Level of organic 1	2	Mean	Straw: cwt. per acre Level of organic 1	2	Mean
	(±1.45)		(±1.03)			
None			41.9(1)			54.1
Stored (bullock boxes) normal litter	42.5	45.2	43.9	55.9	61.1	58.5
Stored (bullock boxes) heavy litter	41.4	44.9	43.2	55.9	58.1	57.0
Fresh (straw bale yards) normal litter	42.4	42.6	42.5	54.2	56.7	55.5
Fresh (straw bale yards) heavy litter	43.7	46.9	45.3	56.8	65.3	61.1
Stored (straw bale yards) normal litter	42.8	45.2	44.0	54.7	56.3	55.5
Stored (straw bale yards) heavy litter	42.6	44.1	43.3	54.8	56.3	55.5
Fresh (straw bale yards low feeding)	41.6	43.6	42.6	54.0	58.4	56.2
As above with Sulphate of Ammonia	44.9	44.6	44.7	57.0	59.0	58.0
Stored (Sunken yard)	45.3	44.8	45.1	61.9	59.0	60.5
Rotted Bracken	41.9	44.4	43.1	56.5	54.1	55.3
Straw with Sulphate of Ammonia	44.4	49.1	46.8	58.0	67.5	62.7
Mean	43.0	45.0	43.8	56.3	59.3	57.4

Standard error (1): ± 0.84

48/Ca/2.3