

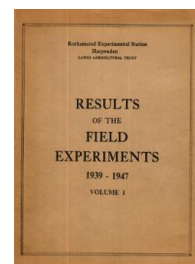
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E/1 Chemical Analysis of Manures

Rothamsted Research

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E/1

CHEMICAL ANALYSES OF FERTILIZERS

Three, Four and Six Course Rotations, 1939-1947

Crop ₁ Year	% N Nitrate of soda	% Total P ₂ O ₅ Super- phosphate	% Total P ₂ O ₅ Mineral ²	% K ₂ O Sulphate ₃ of potash	% K ₂ O Muriate of potash
1939 a		17.0	25.9		53.2
b	16.0	16.9		49.5	52.2
1940 a		16.8	25.9		52.2
b	15.7	17.9		50.3	53.9
1941 a		18.9	25.7		57.0
b	15.7	18.0		49.8	53.8
1942 a		20.0	25.7		53.8
b	16.1	20.3		49.9	53.7
1943 a		20.3	26.4		53.7
b	15.9	20.4		49.8	57.4
1944 a		19.6 ⁴	27.0		57.7
b	16.1	19.6		49.8	57.4
1945 a		19.2	33.2		57.8
b	16.2	18.8		51.2	57.1
1946 a		19.0	33.3		60.6
b	15.8	19.6		50.7	59.9
1947	15.6	19.9	33.1		60.2

Analysis of Sulphate of ammonia 21% N assumed.

1. b refers to spring dressings in the 3-Course Rotation Experiment; a to all other dressings in the 3-, 4- and 6-Course Rotation Experiments. "Crop year 1939" includes 1938 autumn sowings.
2. Mineral phosphate (used in 4-Course only); Gafsa 1939-44, Moroccan 1945-47.
3. Sulphate of potash, applied in spring to potatoes in 3-Course until 1946, replaced by Muriate of potash in 1947.
4. 18.86 for Superphosphate in 4-Course.

E/2

Chemical Analysis of Manures used in Three and Four Course Rotations,

1939-47

Wheat Straw to Three and Four Course Rotations

Crop Year	% Organic Matter	% N	% P ₂ O ₅	% K ₂ O
1939	83.65	0.603	0.311	1.614
1940	77.00	0.541	0.244	1.600
1940 b	84.30	0.537	0.194	1.382
1941	82.87	0.445	0.142	1.185
1942	79.08	0.409	0.138	0.817
1943	84.02	0.525	0.170	0.950
1944	81.00	0.532	0.144	0.620
1945	82.40	0.299	0.088	0.688
1946	81.41	0.450	0.250	0.954
1947	80.38	0.555	0.171	1.011

Adco Compost to Three and Four Course Rotations

1939	12.74	0.398	0.316	0.339
1940	13.73	0.404	0.235	0.332
1941	15.79	0.398	0.277	0.170
1942	14.44	0.398	0.257	0.146
1943	19.00	0.487	0.319	0.180
1944	20.10	0.528	0.284	0.230
1945	21.80	0.434	0.242	0.271
1946	18.04	0.527	0.372	0.322
1947	15.90	0.504	0.372	0.290

Dung to Four Course Rotation

1939	16.45	0.500	0.273	0.709
1940	17.62	0.435	0.164	0.414
1941	14.65	0.520	0.138	0.528
1942	18.08	0.510	0.253	0.858
1943	23.26	0.710	0.300	1.020
1944	35.20	0.846	0.288	1.355
1945	29.65	0.904	0.292	1.608
1946	14.29	0.515	0.203	0.691
1947	14.26	0.453	0.213	0.445

'b' refers to 3-Course Spring dressings