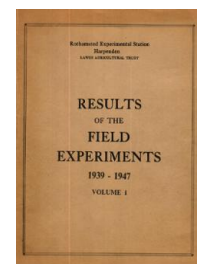


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Yields of the Field Experiments 1939-1947 Volume 1



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A/1 Broadbalk - Wheat

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A/1.1

WHEAT - BROADBALK

The first experimental crop of wheat on Broadbalk was sown in the autumn of 1843 for harvesting in 1844, and wheat has been grown each year ever since. The plot treatments varied until 1852 when the present system of manuring was established.

The general purpose of the experiment was to determine over a long period of years the manurial requirements of wheat, testing dung alone and a number of combinations of the ash constituents of crops (compounds of phosphorus, potassium, sodium and magnesium), together with several forms of nitrogen compounds. One plot running the whole length of the field was assigned to each of the treatments tested. Several varieties, some of them now out of cultivation, have been used during the experiment, but since 1899 Squareheads Master or the very similar Red Standard has been sown.

Weeds have always been a problem on Broadbalk, but in spite of this, continuous cropping was maintained until the harvest of 1925, except that half of every plot was fallowed in 1904 and the remainder in 1905, and this process was repeated in 1914 and 1915. In 1926 it was decided that more systematic methods must be tried and a system of regular bare fallowing was introduced. The field was divided into five equal sections so that every year a part of each of the original $\frac{1}{2}$ acre plots could be under fallow and the remainder under crop. From 1926-29 two sections were cropped yearly, leaving three fallow; in 1930 the whole field was cropped and then in 1931 the present arrangement was begun under which one section of the field is fallowed every year. In each year therefore, the yields of every treatment are obtained for the 1st, 2nd, 3rd and 4th years after fallow.

Since 1943 it has been necessary to hand weed wild oats before harvesting,

A/1.2

Treatments
Symbols and amounts per acre

O	Unmanured
N ₁ , N ₂ , N ₃	Sulphate of ammonia, 43 lb.N, 86 lb.N, 129 lb.N
N ₁ ', N ₂ '	Nitrate of soda, 43 lb.N, 86 lb.N
P	Superphosphate, 65 lb.P ₂ O ₅
K	Sulphate of potash, 98 lb.K ₂ O
S	Sulphate of soda, 366 lb.
M	Sulphate of magnesia, 280 lb.
C	Complete mineral manure, consisting of superphosphate (65 lb.P ₂ O ₅), sulphate of potash (98 lb.K ₂ O), sulphate of soda (100 lb.) and sulphate of magnesia (100 lb.)
C'	As C but without the superphosphate
D	Farmyard manure, 14 tons
R	Rape cake (castor bean meal from 1940 onwards), 1889 lb.

Dung is ploughed-in in autumn. Rape cake and minerals are applied in autumn on the seed bed. 21.5 lb. N per acre of the N₁, N₂ and N₃ treatments is applied in autumn and the remainder of the dressing in spring, except that Plot 15 receives its full dressing in autumn. Nitrate of soda ~~is applied~~ is applied in spring, there being two applications at intervals of a month on plot 16. Plot 2A was unmanured before 1885.

The experiment is discussed, and early departures from the present manuring scheme are described by Sir John Russell and D.J.Watson in "The Rothamsted Field Experiments in the growth of wheat", Imp.Bureau Soil Sci.Tech.Comm. No.40.

Investigations by the Soil Microbiology Department are described by B.N.Singh, "The effect of artificial fertilizers and dung on the numbers of amoebae in Rothamsted soils", J.Gen.Microbiol. 3, (1949), 204.

Weed surveys have been made annually by the Botany Department.

A/1.3

Wheat - Broadbalk

The present fallowing cycle and the preceding fallows are shown in the diagram below. (C = crop, F = fallow). The sections (I to V) are numbered in order from the upper (western) end of the field. Preparatory to the first fallow the field was harvested in five separate sections (1925).

Year	I	II	III	IV	V	Year	I	II	III	IV	V
1926	F	F	F	C	C	1931, -36, -41, -46	F	C	C	C	C
1927	F	F	F	C	C	1932, -37, -42, -47	C	F	C	C	C
1928	C	C	F	F	F	1933, -38, -43, -48	C	C	C	C	F
1929	C	C	F	F	F	1934, -39, -44, -49	C	C	C	F	C
1930	C	C	C	C	C	1935, -40, -45, -50	C	C	F	C	C

Plot 20 extends over sections I and II only.

Crop Notes

Crop Year	Date sown	Date harvested	Variety
1939	Oct. 26	Aug. 18	Red Standard
1940	Oct. 25	Aug. 8	Squareheads Master
1941	Oct. 25	Aug. 20	Squareheads Master
1942	Oct. 24	Aug. 15	Red Standard
1943	Oct. 15	Aug. 4	Red Standard
1944	Oct. 16	Aug. 5	Red Standard
1945	Nov. 8	Aug. 12	Red Standard
1946	Oct. 20	Aug. 16	Squareheads Master 13/4
1947	Oct. 31	Aug. 8	Squareheads Master 13/4

In 1941 there was a considerable amount of lodging, particularly on plots 2A, 2B, 8, 12, 14 and 16.

A/1.4

		Total Grain: cwt. per acre					Total Straw: cwt. per acre				
Years after fallow		1	2	3	4	Mean	1	2	3	4	Mean
96th season, 1939											
Plot	Section	V	II	I	III		V	II	I	III	
2A D		24.1	18.5	15.7	19.7	19.5	62.7	40.1	43.0	42.8	47.2
2B D		26.1	23.5	15.7	18.1	20.8	64.2	51.6	48.9	47.8	53.1
3 O		16.7	7.7	8.7	8.9	10.5	29.7	17.0	16.4	19.1	20.6
5 C		18.6	9.9	9.3	7.8	11.4	36.1	24.9	21.9	19.2	25.5
6 N ₁ C		22.5	13.8	10.9	11.8	14.8	45.3	33.9	29.5	54.5	40.8
7 N ₂ C		26.4	19.3	13.5	15.8	18.8	55.8	43.4	39.8	37.7	44.2
8 N ₂ C		20.8	21.6	11.8	12.5	16.7	59.0	54.7	62.9	52.9	57.4
9 N ₁ 'C		24.1	16.2	11.3	14.0	16.4	53.5	35.2	28.5	29.8	36.8
10 N ₂		20.2	19.6	14.4	17.1	17.8	38.8	35.6	33.4	32.4	35.0
11 N ₂ P		18.6	18.9	13.4	15.8	16.7	36.6	35.7	28.8	30.4	32.9
12 N ₂ PS		21.2	20.4	14.8	16.4	18.2	42.4	40.1	32.7	32.3	36.9
13 N ₂ PK		23.1	17.5	14.4	15.3	17.6	55.2	42.1	33.8	35.2	41.6
14 N ₂ PM		24.6	19.9	14.1	17.1	18.9	52.7	35.3	29.1	32.4	37.4
15 N ₂ *C		17.8	16.5	12.7	12.8	15.0	37.1	34.3	28.8	29.3	32.4
16 N ₂ 'C		25.4	18.5	11.8	13.5	17.3	69.4	48.9	43.6	44.9	51.7
17 } N ₂ and C in (C)		13.7	10.1	5.6	7.9	9.3	31.6	24.4	18.8	21.8	24.2
18 } alternate (N ₂)		22.5	17.1	14.6	13.5	16.9	43.8	38.1	34.8	25.9	35.6
	years										
19 R		21.8	17.5	12.4	16.2	17.0	42.6	32.6	27.1	29.2	32.9
20 N ₂ C'		19.3	13.2			16.2	42.6	32.7			37.6

97th season, 1940											
Plot	Section	IV	V	II	I		IV	V	II	I	
2A D ₂		33.1	31.9	27.7	15.4 ⁺	27.0	55.7	44.6	42.2	39.3	45.4
2B D		37.0	29.0	32.3	23.8 ⁺	30.5	57.8	42.4	46.5	43.3	47.5
3 O		21.5	13.6	12.6	15.4	15.8	28.6	18.7	16.7	18.3	20.6
5 C		25.5	12.7	14.4	16.3	17.2	38.8	17.0	17.9	22.6	24.1
6 N ₁ C		30.5	17.1	17.8	20.8	21.6	47.3	25.6	23.6	28.2	31.2
7 N ₁ C		34.6	21.1	24.4	26.7	26.7	61.7	35.2	37.7	42.4	44.2
8 N ₂ C		32.2	27.1	27.4	29.9	29.2	61.8	51.7	47.5	55.3	54.1
9 N ₁ 'C		31.7	19.0	20.9	26.3	24.5	50.7	30.3	33.0	43.4	39.4
10 N ₂		14.8	18.4	17.5	19.8	17.6	26.0	24.3	21.9	27.8	25.0
11 N ₂ P		27.9	19.0	20.0	20.9	22.0	41.4	31.5	25.3	30.0	32.0
12 N ₂ PS		32.9	20.3	22.9	25.5	25.4	48.1	29.8	30.9	36.2	36.2
13 N ₂ PK		35.7	17.8	22.5	24.0	25.0	59.7	33.3	33.6	37.7	41.1
14 N ₂ PM		34.4	18.7	22.1	24.3	24.9	54.9	30.2	30.4	36.2	37.9
15 N ₂ *C		32.6	15.1	22.6	25.8	24.0	51.8	25.1	33.3	38.3	37.1
16 N ₂ 'C		33.8	26.8	29.6	27.6	29.4	60.8	40.1	43.0	45.3	47.3
17 } N ₂ and C in (N ₂)		33.7	25.2	26.2	28.6	28.4	56.4	39.1	39.3	42.2	44.2
18 } alternate (C)		24.4	11.0	11.5	12.2	14.8	33.5	17.1	17.3	15.3	20.8
	years										
19 R		34.2	19.0	21.0	20.7	23.7	52.3	28.5	29.3	31.6	35.4
20 N ₂ C'		-	-	20.4	23.0	21.7	-	-	25.4	33.4	29.4

Wheat - Broadbalk

A/1.5

		Total Grain: cwt. per acre					Total Straw [†] : cwt. per acre				
Years after fallow		1	2	3	4	Mean	1	2	3	4	Mean
98th season, 1941											
Plot	Section	III	IV	V	II		III	IV	V	II	
2A	D	16.8	13.7	14.4	9.5	13.6	40.1	26.6	25.0	25.4	29.3
2B	D	19.2	16.0	16.2	9.1	15.1	41.8	30.8	23.3	25.7	31.6
3	O	14.3	4.5	6.6	4.7	7.5	23.9	7.6	8.7	7.8	12.0
5	C	14.9	5.0	7.2	5.9	8.2	23.3	10.3	12.4	10.0	14.0
6	N ₁ C	15.7	9.6	9.8	7.6	10.7	29.1	16.1	15.2	14.0	18.6
7	N ₂ C	17.1	14.2	12.6	11.3	13.8	39.7	31.7	27.2	22.2	30.2
8	N ₃ C	20.9	14.3	13.1	16.2	16.1	46.2	37.6	32.1	35.0	37.7
9	N ₁ 'C	17.3	12.1	11.9	11.6	13.4	34.6	22.8	22.2	22.8	25.6
10	N ₂	13.8	14.3	12.5	12.2	13.2	26.6	27.2	19.6	17.4	22.7
11	N ₂ P	16.7	14.5	10.9	11.1	13.3	30.2	26.1	19.4	18.0	23.4
12	N ₂ PS	18.2	16.0	14.1	13.8	15.5	35.0	27.0	23.6	20.2	26.4
13	N ₂ PK	19.3	14.5	9.9	11.3	13.8	28.1	28.0	22.1	18.6	24.2
14	N ₂ PM	19.7	16.7	11.8	12.3	15.1	34.4	28.3	22.3	13.4	25.8
15	N ₂ *C	13.4	12.0	5.6	9.8	11.4	36.7	20.1	11.7	14.2	20.7
16	N ₂ 'C	21.7	15.9	14.9	15.7	17.0	49.7	36.2	31.7	31.0	37.2
17}	N ₂ and C in (C) alternate years (N ₂)	15.6	5.7	4.0	4.1	7.4	35.5	8.4	6.2	6.4	14.1
18}		18.8	12.2	12.4	10.1	13.4	31.8	21.3	21.6	18.0	23.2
19	R	18.0	13.5	9.3	9.2	12.5	29.9	22.7	13.3	11.6	19.4
20	N ₂ C'				11.6	11.6				19.6	19.6

99th season, 1942											
Plot	Section	I	III	IV	V		I	III	IV	V	
2A	D	20.7	23.7	24.5	27.9	24.2	52.2	43.2	45.1	43.6	46.0
2B	D	19.6	26.8	28.6	26.6	25.4	53.5	43.2	45.1	42.4	47.3
3	O	15.7	10.1	15.9	15.0	14.2	22.7	13.5	20.1	18.6	18.7
5	C	21.6	11.7	16.7	17.0	16.8	34.7	15.5	23.7	20.7	23.6
6	N ₁ C	25.1	16.3	18.6	21.5	20.4	42.3	22.7	26.7	29.4	30.3
7	N ₂ C	28.9	23.0	27.1	26.4	26.4	43.8	33.9	37.1	36.4	39.0
8	N ₃ C	25.8	25.7	28.8	24.8	26.3	52.4	39.8	41.6	39.7	43.4
9	N ₁ 'C	27.1	20.5	17.8	18.0	20.3	45.2	29.1	24.3	24.0	30.6
10	N ₂	22.9	23.4	18.5	17.2	20.5	32.2	28.6	22.8	21.4	26.2
11	N ₂ P	18.2	21.3	17.9	16.6	18.5	29.2	28.2	23.1	31.2	27.9
12	N ₂ PS	24.5	24.4	25.4	21.0	23.8	37.0	36.3	29.7	26.3	32.3
13	N ₂ PK	23.0	22.7	23.3	23.8	24.5	48.5	31.3	33.1	32.9	36.4
14	N ₂ PM	25.0	22.4	25.0	22.3	23.7	35.4	32.2	32.2	28.6	32.1
15	N ₂ *C	28.6	20.9	23.7	21.2	23.6	49.8	33.5	33.5	32.6	37.4
16	N ₂ 'C	28.1	25.6	24.3	23.5	25.4	46.6	36.2	35.5	33.9	38.0
17	N ₂ and C in (N ₂) alternate years (C)	23.8	22.2	25.8	24.0	25.2	43.4	31.6	37.2	34.7	36.7
18		21.6	10.4	11.5	13.6	14.3	29.6	14.6	15.5	22.1	20.4
19	R	31.1	22.2	23.0	24.7	25.2	42.7	29.7	33.1	33.3	34.7
20	N ₂ C'	24.0				24.0	35.0				35.0

[†] Includes straw, cavings and chaff. * Sulphate of ammonia applied in autumn.

A/1.6

Years after fallow		Total Grain: cwt. per acre					Total Straw [†] : cwt. per acre				
		1	2	3	4	Mean	1	2	3	4	Mean
100th season, 1943											
Plot	Section	II	I	III	IV		II	I	III	IV	
2A D		28.5	20.0	15.9	6.6	17.7	62.5	49.8	41.0	46.8	50.0
2B D		29.7	21.4	23.1	14.4	22.2	65.9	57.5	48.6	49.4	55.4
3 O		25.0	13.4	10.1	8.6	14.3	37.9	17.6	14.2	11.1	20.2
5 C		24.9	12.3	11.0	8.8	14.2	43.3	17.6	17.3	14.1	23.1
6 N ₁ C		25.0	17.0	14.7	13.3	17.5	46.3	28.2	26.1	25.3	31.5
7 N ₂ C		28.5	26.1	21.7	21.3	24.4	54.4	50.7	44.8	43.9	48.4
8 N ₃ C		27.3	23.6	20.5	18.9	22.6	58.7	60.0	54.3	54.3	56.8
9 N ₁ 'C		26.5	20.8	16.4	16.5	20.0	46.8	40.5	32.3	33.1	38.3
10 N ₂		24.1	25.1	20.6	19.0	22.2	36.4	41.2	34.3	31.0	35.7
11 N ₂ P		23.8	24.7	19.6	19.3	21.8	36.2	42.4	30.7	30.9	35.0
12 N ₂ PS		25.8	23.4	21.7	22.9	23.4	44.2	43.3	36.2	40.5	41.0
13 N ₂ PK		30.0	21.3	19.5	20.3	22.8	53.7	47.5	38.7	42.3	45.6
14 N ₂ PM		26.4	25.1	20.9	21.6	23.5	41.1	45.9	35.4	38.0	40.1
15 N ₂ *C		26.5	22.2	19.1	19.5	21.8	45.1	41.9	37.3	36.0	40.1
16 N ₂ 'C		33.2	25.6	23.7	23.5	27.8	56.1	52.2	50.8	43.5	50.6
17 } N ₂ and C in (C)		23.3	11.4	9.7	8.5	13.2	36.4	17.3	14.4	12.5	20.2
18 } alternate (N ₂)		27.8	22.1	22.2	22.2	23.6	45.3	38.1	39.9	39.8	40.8
	years										
19 R		28.9	23.6	19.1	20.2	23.0	43.6	37.8	31.5	35.3	37.0
20 N ₂ C'		23.2	19.9			21.6	36.2	37.2			36.7

101st season, 1944											
Plot	Section	V	II	I	III		V	II	I	III	
2A D		29.8	22.7	16.6	15.8	21.2	62.4	48.5	41.8	36.4	47.3
2B D		29.2	27.5	22.5	23.2	25.6	53.3	51.6	50.0	48.8	50.9
3 O		18.6	8.3	7.9	9.1	11.0	21.4	12.1	12.1	12.0	14.4
5 C		20.2	9.0	9.1	10.2	12.1	29.3	11.8	11.8	14.1	16.8
6 N ₁ C		25.1	11.7	14.9	13.1	16.2	38.7	18.7	22.9	19.2	24.9
7 N ₂ C		29.5	19.3	22.8	20.6	23.0	46.3	36.9	33.6	33.9	38.9
8 N ₃ C		29.9	23.6	24.9	27.0	26.4	54.5	44.4	53.2	45.4	49.4
9 N ₁ 'C		23.9	13.9	15.4	19.3	18.2	35.1	22.2	23.2	31.3	28.0
10 N ₂		16.2	18.4	17.4	17.6	17.4	26.2	27.4	29.4	25.2	27.0
11 N ₂ P		15.3	15.7	14.2	13.8	14.9	25.4	26.1	27.8	24.6	26.0
12 N ₂ PS		22.6	16.5	17.2	16.6	18.2	36.9	25.3	31.8	27.0	30.2
13 N ₂ PK		28.7	20.1	20.2	17.7	21.7	46.7	36.6	41.0	31.9	39.0
14 N ₂ PM		27.2	16.0	17.3	15.6	19.0	42.9	27.9	31.5	26.6	32.2
15 N ₂ *C		25.8	19.3	20.7	20.1	21.5	45.8	32.0	40.9	31.7	37.6
16 N ₂ 'C		31.4	23.4	23.7	26.5	26.2	51.6	30.8	36.8	37.1	39.1
17 } N ₂ and C in (N ₂)		26.9	18.9	19.2	20.0	21.2	44.3	28.2	31.1	29.2	33.2
18 } alternate (C)		27.2	8.9	6.1	7.7	12.5	42.1	9.2	8.5	10.6	17.6
	years										
19 R		29.3	18.1	16.1	15.4	19.7	50.9	28.4	23.4	27.5	32.6
20 N ₂ C'			20.7	13.9		17.3		33.4	21.3		27.4

[†]Includes straw, cavings and chaff. * Sulphate of ammonia applied in autumn.

A/1.7

Wheat - Broadbalk

		Total Grain: cwt. per acre					Total Straw [†] : cwt. per acre				
Years after fallow		1	2	3	4	Mean	1	2	3	4	Mean
102nd season, 1945											
Plot	Section	IV	V	II	I		IV	V	II	I	
2A	D	25.1	28.9	23.1	12.3	22.4	44.7	46.1	43.3	47.7	45.4
2B	D	23.4	31.0	25.0	17.5	24.2	52.5	49.0	46.5	52.5	50.1
3	O	14.6	11.6	6.5	7.6	10.1	22.1	14.6	10.8	12.0	14.9
5	C	20.9	14.9	9.9	10.5	14.0	34.0	17.6	13.3	15.5	20.1
6	N ₁ C	23.5	18.9	11.4	13.7	16.9	40.2	30.7	19.4	22.1	28.1
7	N ₂ C	23.3	20.8	16.1	22.3	20.6	42.0	36.2	29.5	43.4	37.8
8	N ₃ C	24.0	27.8	22.5	25.2	24.9	43.9	49.4	40.9	55.2	47.4
9	N ₁ 'C	15.2	15.4	13.2	14.7	14.6	30.3	25.1	22.5	27.6	26.4
10	N ₂	14.6	21.7	15.3	13.7	16.3	24.4	31.8	24.1	24.8	26.3
11	N ₂ P	14.2	17.5	13.9	16.2	15.4	29.5	26.2	22.9	29.2	27.0
12	N ₂ PS	18.5	22.0	16.9	16.8	18.6	36.0	34.2	27.6	31.5	32.3
13	N ₂ PK	23.3	22.3	15.1	15.4	19.0	45.1	40.2	27.9	31.9	36.3
14	N ₂ PM	16.0	23.8	14.4	14.4	17.2	38.4	39.1	25.1	29.5	33.0
15	N ₂ *C	22.4	20.0	17.7	18.4	19.6	41.2	33.3	30.6	36.4	35.4
16	N ₂ 'C	21.0	23.6	20.8	20.4	21.4	41.8	41.5	39.3	43.4	41.5
17	N ₂ and C in (C) alternate (N ₂) years	16.6	10.3	7.7	9.2	11.0	29.9	15.9	12.4	15.1	18.3
18		20.8	16.5	17.2	16.4	17.7	38.3	26.5	28.4	28.4	32.9
19	R	23.2	18.0	14.9	16.3	18.1	41.1	27.3	25.2	28.3	30.4
20	N ₂ C'			13.6	15.2	14.4			28.1	28.6	28.4
103rd season, 1946											
Plot	Section	III	IV	V	II		III	IV	V	II	
2A	D	31.7	15.4 ⁺	20.0	17.9	21.2	71.6	55.1 ⁺	55.7	45.1	56.9
2B	D	29.3	18.2 ⁺	21.0	22.2	22.7	75.5	52.2 ⁺	48.3	48.6	56.2
3	O	18.7	7.3	7.3	7.3	10.2	35.9	16.0	14.6	15.9	20.6
5	C	20.4	9.2	9.7	10.0	12.3	40.0	22.0	19.7	24.3	26.5
6	N ₁ C	24.4	9.8	9.9	8.8	13.2	53.6	29.2	25.8	26.8	33.8
7	N ₂ C	26.4	15.9	15.3	14.4	18.0	63.9	41.2	38.1	36.4	44.9
8	N ₃ C	31.4	20.2	20.1	17.0	22.2	72.0	59.9	57.7	52.6	60.6
9	N ₁ 'C	26.6	18.2	14.6	12.1	17.9	52.8	40.3	34.2	31.9	39.8
10	N ₂	25.6	19.5	12.3	16.9	18.6	51.8	40.8	33.9	33.1	39.9
11	N ₂ P	20.2	15.2	15.2	14.5	16.3	39.3	44.2	34.1	32.1	37.4
12	N ₂ PS	22.4	15.3	11.9	16.0	16.4	45.3	37.7	34.0	33.2	37.6
13	N ₂ PK	29.0	17.4	14.9	14.7	19.0	62.0	44.0	39.6	38.0	45.9
14	N ₂ PM	25.3	20.9	16.8	15.1	19.5	47.8	45.5	41.4	32.6	41.8
15	N ₂ *C	25.3	17.9	15.5	14.7	18.4	58.1	38.5	32.8	34.5	41.0
16	N ₂ 'C	31.9	20.6	19.2	16.2	22.0	67.6	53.3	47.9	43.1	53.0
17	N ₂ and C in (N ₂) alternate (C) years	24.5	19.1	19.6	15.9	19.8	60.6	42.2	46.5	36.0	46.3
18		18.9	9.7	7.9	3.3	10.0	42.3	20.5	18.3	10.2	22.8
19	R	24.3	18.1	17.0	13.3	18.2	50.3	39.4	37.6	27.7	38.8
20	N ₂ C'				11.1	11.1				28.1	28.1

A/1.8

Years after fallow		Total Grain: cwt. per acre					Total Straw [†] : cwt. per acre				
		1	2	3	4	Mean	1	2	3	4	Mean
104th season, 1947											
Plot	Section	I	III	IV	V		I	III	IV	V	
2A	D	19.1	14.6	19.4	14.6	16.9	28.3	19.7	25.9	20.7	23.6
2B	D	20.6	16.9	15.0	14.5	16.8	31.9	25.7	20.3	20.6	24.6
3	O	10.1	4.4	5.7	4.9	6.3	12.0	5.3	7.3	6.7	7.8
5	C	16.5	6.2	9.5	7.9	10.0	24.3	9.1	12.8	12.9	14.8
6	NN ₁ C	19.0	9.0	8.8	7.3	11.0	25.0	13.2	15.6	13.8	16.9
7	N ₂ C	22.3	12.5	7.8	7.1	12.4	28.4	18.1	13.9	15.6	19.0
8	N ₂ C	20.7	16.7	12.4	11.5	15.3	34.3	23.6	22.3	23.0	25.8
9	N ₁ 'C	15.1	9.4	6.5	6.9	9.5	25.5	11.3	10.0	11.2	14.5
10	N ₂	8.1	8.1	5.3	4.1	6.4	16.7	11.5	7.7	6.6	10.6
11	N ₂ P	9.4	9.8	5.8	4.0	7.2	22.9	12.0	7.5	8.1	12.6
12	N ₂ PS	13.0	10.0	7.1	5.5	8.9	23.9	14.0	11.5	13.6	15.8
13	N ₂ PK	22.2	9.7	6.7	6.1	11.2	30.8	15.0	12.2	11.3	17.3
14	N ₂ PM	14.5	10.7	7.3	6.6	9.8	25.3	17.5	11.1	12.5	16.6
15	N ₂ *C	20.5	11.3	9.1	7.0	12.0	29.2	20.6	13.5	11.6	18.7
16	N ₂ 'C	19.2	13.6	11.3	11.1	13.8	28.5	19.3	19.4	18.8	21.5
17	N ₂ and C in (C) alternate (N ₂) years	14.6	5.0	5.6	6.4	7.9	21.7	9.7	8.4	9.7	12.4
18		16.1	10.3	14.9	15.3	14.2	21.2	15.2	19.6	19.4	18.8
19	R	15.7	10.0	8.5	10.2	11.1	21.6	15.1	15.9	16.9	17.4
20	N ₂ G'	9.7				9.7	15.0				15.0

[†]Includes straw, cavings and chaff

*Sulphate of ammonia applied in autumn

[†]Yields from small areas left after cutting green wheat and wild oats.
(only happened in 1940 and 1946)