ROTHAMSTED RESEARCH

Yields of the Field Experiments 1975

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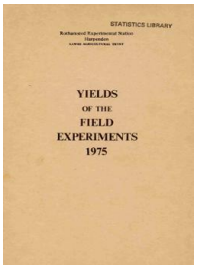

75/ S/CS/1 - Varieties, N & Ccc - Wheat

Rothamsted Research

Rothamsted Research (1976) *75/ S/CS/1 - Varieties, N & Ccc - Wheat ;* Yields Of The Field Experiments 1975, pp 279 - 282 **- DOI: https://doi.org/10.23637/ERADOC-1-141**

75/S/CS/1

VARIETIES. N AND CCC

Object: To study the effects of nitrogen fertiliser, at a range of rates and times, and chlormequat (CCC) on the yield of two varieties of winter wheat - Saxmundham, Oldershaw's and Garner's plots.

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The tenth year, winter wheat.

For previous years see 66/C/30(t), 67/C/23(t), 68/C/39, 69-70/S/CS/1, 71/S/CS/1(t), 72/S/CS/1(t) and 73-74/S/CS/1.

Design: A single replicate of 4 x 2 x 2 x 2 in 4 blocks of 4 plots, each split lengthways into 2, plus one additional plot per block. Additionally all the plots are split breadthways into 3.

Whole plot dimensions: 5.49 x 40.2.

Treatments: All combinations of:-

Whole plots (All sown at a seed rate of 170 kg with 13 cm (5 inches) between the rows):

1. Number of previous continuous wheat crops: — PREVCROP

6	6 WHEAT
7	7 WHEAT
8	8 WHEAT
9	9 WHEAT

2. Chlormequat (kg): — CCC

None	0.0
1.7 in 340 l	1.7

Half plots:

3. Times of applying nitrogen fertiliser: — N TIME

Single dressing (5 May)	SINGLE
Divided dressing (Half 23 April, half 15 May)	DIVIDED

4. Varieties: — VARIETY

Cappelle	CAPPELLE
Maris Huntsman	HUNTSMAN

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Pairs of sixth plots: 5. Rates of nitrogen fertiliser in addition to 62 kg N in autumn (28 Oct) (kg N): N RATE

50	50
100	100
150	150

Together with one extra plot per block which had 5 previous wheat crops and was sown with Cappelle at a seed rate of 180 kg with 20 cm (8 inches) between the rows and tested all combinations of: EXTRA

Half plots: 1. Time of applying nitrogen fertiliser: N TIME

23 Apr	APRIL
15 May	MAY

Pairs of sixth plots: 2. Rate of nitrogen fertiliser (kg N): N RATE

50	50
100	100
150	150

NOTE: 62 kg N, 31 kg P2O5, 31 kg K2O was broadcast at drilling as (20:10:10) to all plots except EXTRA. EXTRA plots were to have tested autumn N as in 74/S/CS/1 but bad weather prevented this. A test of early v late spring N was substituted and these plots received a balancing dressing of 31 kg P2O5 and 31 kg K2O as (0:20:20).

Basal applications: Manures: (0:20:20) at 1260 kg applied to stubble before ploughing. Weedkillers: Ioxynil at 0.63 kg with mecoprop at 1.9 kg in 450 l.

Cultivations, etc.:- Basal PK applied: 10 Sept, 1974. Ploughed: 16 Sept. NPK applied to all plots except EXTRA and all seed sown: 28 Oct. Balancing PK applied to EXTRA plots: 22 Apr, 1975. Weedkillers applied: 30 Apr. Chlormequat applied: 15 May. Combine harvested: 19 Aug.

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75/S/CS/1

GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

PREVCROP CCC	6 WHEAT	7 WHEAT	8 WHEAT	9 WHEAT	MEAN
0.0	3.81	3.99	3.76	3.84	3.85
1.7	4.35	4.05	4.21	3.75	4.09
MEAN	4.08	4.02	3.99	3.80	3.97

PREVCROP N TIME	6 WHEAT	7 WHEAT	8 WHEAT	9 WHEAT	MEAN
SINGLE	3.99	3.62	3.83	3.65	3.77
DIVIDED	4.17	4.42	4.14	3.95	4.17
MEAN	4.08	4.02	3.99	3.80	3.97

PREVCROP VARIETY	6 WHEAT	7 WHEAT	8 WHEAT	9 WHEAT	MEAN
CAPPELLE	4.12	4.11	4.02	3.67	3.98
HUNTSMAN	4.04	3.94	3.95	3.93	3.97
MEAN	4.08	4.02	3.99	3.80	3.97

PREVCROP N RATE	6 WHEAT	7 WHEAT	8 WHEAT	9 WHEAT	MEAN
50	2.98	3.04	2.69	2.76	2.87
100	3.81	4.24	4.08	3.93	4.02
150	5.45	4.78	5.19	4.70	5.03
MEAN	4.08	4.02	3.99	3.80	3.97

GRAIN MEAN DM% 85.1

PLOT AREA HARVESTED 0.00355

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75/S/CS/1

EXTRA

GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

N RATE	50	100	150	MEAN
N TIME				
APRIL	2.80	3.62	4.62	3.68
MAY	2.84	3.62	4.49	3.65
MEAN	2.82	3.62	4.55	3.67

GRAIN MEAN DM% 85.0

STRAW TONNES/HECTARE

*** TABLES OF MEANS ***

N RATE	50	100	150	MEAN
N TIME				
APRIL	3.26	4.18	4.55	4.00
MAY	2.72	3.96	4.29	3.65
MEAN	2.99	4.07	4.42	3.83

STRAW MEAN DM% 80.9

PLOT AREA HARVESTED 0.00355

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