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Yields of the Field Experiments 1975

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75/ R/M/1 - Maize & Spring Wheat Physiological Study - Grass

Rothamsted Research

Rothamsted Research (1976) 75/ R/M/1 - *Maize & Spring Wheat Physiological Study - Grass* ; Yields Of The Field Experiments 1975, pp 399 - 400 - DOI: <https://doi.org/10.23637/ERADOC-1-141>

75/R/M/1

SPRING WHEAT AND MAIZE

PHYSIOLOGICAL STUDY

Object: To study the photosynthetic mechanisms of spring wheat and maize and assess the effects of a photorespiration inhibitor - Fosters Corner.

Sponsors: A.J. Keys, A.J. Barnard.

Design: Spring wheat: 3 randomised blocks of 9 plots. Maize: 1 randomised block of 9 plots.

Whole plot dimensions: Spring wheat: 4.06 x 6.10. Maize: 4.27 x 6.10.

Treatments: All combinations of:-

1. Rates of photorespiration inhibitor (ethyl-2,3-epoxypropanoate) kg:

	E E RATE
None	0.00
0.27	0.27
0.77	0.77

2. Times of applying photorespiration inhibitor:

	E E TIME
Early, wheat: 24 June. Maize: 11 July	EARLY
Middle, wheat: 11 July. Maize: 29 July	MIDDLE
Late, wheat: 29 July. Maize: 7 Aug	LATE

NOTE: Yields were not taken from the maize.

Basal applications: Manures: (20:14:14) at 500 kg combine drilled for wheat and at 750 kg for maize. Weedkillers: Wheat: Dicamba with mecoprop and MCPA ('Tetralax Plus' at 7.0 l in 340 l), maize: Atrazine at 1.7 kg in 340 l.

Seed: Wheat: Kleiber, sown at 190 kg.

Maize: Cargill Primeur 170 sown at 123000 seeds per ha.

Cultivations, etc.:- Ploughed: 11 Nov, 1974. Spring-tine cultivated: 21 Apr, 1975. Spring-tine cultivated and rotary harrowed: 24 Apr. Wheat: NPK applied and seed sown: 26 Apr. Weedkiller applied: 9 June. Combine harvested: 28 Aug. Maize: NPK applied: 12 May. Power harrowed and seed sown: 14 May. Weedkiller applied: 23 May. Harvested: 14 Nov. Previous crops: Barley 1973, beans 1974.

75/R/M/1

GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

E E TIME E E RATE	EARLY	MIDDLE	LATE	MEAN
0.27	2.92	2.87	2.97	2.92
0.77	2.87	3.01	2.85	2.91
MEAN	2.89	2.94	2.91	2.91

E E RATE 0.0 2.91

GRAND MEAN 2.91

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	E E RATE	E E TIME	E E RATE E E TIME AND E E RATE 0.0
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SED	0.092	0.112	0.159

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	18	0.194	6.7

MEAN D.M% 87.9

PLOT AREA HARVESTED 0.00101