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# Yields of the Field Experiments 1986

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## 86/R/MA/1 Varieties, Sowing Dates and Polythene Covers - Maize

### Rothamsted Research

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86/R/MA/1

MAIZE

VARIETIES, SOWING DATES AND POLYTHENE COVERS

Object: To study the effects of two sowing dates and polythene covers to the seedbed on the maturity dates and yield of three maize varieties grown for forage and grain - Long Hoos IV 6.

Sponsor: A.J. Barnard.

Design: 3 randomised blocks of 12 plots.

Whole plot dimensions: 1.6 x 10.4.

Treatments: All combinations of:-

- |             |                                 |
|-------------|---------------------------------|
| 1. VARIETY  | Varieties:                      |
|             | BASTILLE                        |
|             | FRONICA                         |
|             | LEADER                          |
| 2. SOW DATE | Dates of sowing:                |
| 2 MAY       | 2 May, 1986                     |
| 30 MAY      | 30 May                          |
| 3. COVERS   | Covers to seedbed after sowing: |
| NONE        | None                            |
| POLYTHNE    | Polythene sheet                 |

- NOTES: (1) The covers were photo-degradable and were laid by hand, within 12 days of sowing, and then perforated at about 10 cm intervals over the drill rows to allow seedling emergence.
- (2) The planned grain harvest was not achieved because grain did not mature. Fresh weights of cobs were taken.

Basal applications: Manures: 'Nitro-Chalk' at 550 kg. Weedkiller: Atrazine at 1.7 kg in 220 l.

Seed: Varieties sown at 100,000 seeds per hectare.

Cultivations, etc.:- Ploughed: 25 Jan, 1986. Spring-tine cultivated: 29 Apr. N applied: 2 May. Early-sown plots spring-tine cultivated and sown: 2 May. Atrazine and polythene treatments applied to early-sown plots: 14 May. Late-sown plots spring-tine cultivated and sown: 30 May. Atrazine applied to late-sown plots: 5 June. Polythene treatments applied to late-sown plots: 6 June. Harvested by hand: Forage harvest: Early-sown, with polythene: 8 Oct. Early-sown, no polythene and late-sown, with polythene: 3 Nov. Late-sown, no polythene: 20 Nov. Cob harvest: 1 Dec. Previous crops: Maize 1984 and 1985.

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NOTE: Plant samples were taken in mid-June for measurements of stem height, root growth and for leaf number counts. Cob samples were taken in early October for measurement of length, grain set and maturity.

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FORAGE TONNES/HECTARE

\*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

SOW DATE VARIETY	2 MAY	30 MAY	MEAN
BASTILLE	12.58	12.67	12.62
FRONICA	12.73	12.08	12.41
LEADER	10.83	11.82	11.33

MEAN	12.05	12.19	12.12
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COVERS VARIETY	NONE	POLYTHNE	MEAN
BASTILLE	13.72	11.53	12.62
FRONICA	12.78	12.04	12.41
LEADER	12.26	10.39	11.33

MEAN	12.92	11.32	12.12
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COVERS SOW DATE	NONE	POLYTHNE	MEAN
2 MAY	13.19	10.90	12.05
30 MAY	12.65	11.74	12.19

MEAN	12.92	11.32	12.12
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SOW DATE COVERS VARIETY	2 MAY NONE	2 MAY POLYTHNE	30 MAY NONE	30 MAY POLYTHNE
BASTILLE	14.09	11.07	13.35	11.99
FRONICA	13.92	11.55	11.65	12.52
LEADER	11.58	10.09	12.95	10.70

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

TABLE	VARIETY	SOW DATE	COVERS	VARIETY SOW DATE
SED	0.888	0.725	0.725	1.256

TABLE	VARIETY COVERS	SOW DATE COVERS	VARIETY SOW DATE COVERS
SED	1.256	1.025	1.776

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

STRATUM	DF	SE	CV%
BLOCK.WP	22	2.175	17.9

FORAGE MEAN DM% 21.3

PLOT AREA HARVESTED 0.00028