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

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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	POLYTHNE	30 MAY NONE	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