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77/R/B/6 Sowing Dates and Pathogen Control - Barley

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77/R/E/6

SPRING BARLEY

SOWING DATES AND PATHOGEN CONTROL

Object: To study the effects of aphid, virus and fungus control on pathogens and yield of barley sown on two dates - Summerdells II.

Sponsors: R.T. Plumb, J.F. Jenkyn.

Design: 3 blocks of 2 x 2 x 2 x 2, randomisation restricted.

Whole plot dimensions: 6.40 x 18.3.

Treatments: All combinations of:-

1. SOW DATE Dates of sowing:
 8 MAR 8 March, 1977
 25 APR 25 April
2. FUNGCIDE Fungicide:
 NONE None
 E+T Ethirimol seed dressing; tridemorph spray
3. APHICIDE(1) Aphicide to seedbed:
 NONE None
 PHORATE Phorate at 5 kg as granules
4. APHICIDE(2) Aphicide on 29 June:
 NONE None
 MENAZON Menazon ('Saphi-col' at 0.7 in 340 l)

NOTE: Tridemorph applied at 0.53 kg in 340 l on 22 June.

Basal applications: Manures: (20:14:14) at 440 kg, combine drilled to SOW DATE 8 MAR. (20:14:14) at 188 kg, combine drilled plus (20:14:14) at 235 kg broadcast after sowing to SOW DATE 25 APR. Weedkillers: Dicamba with mecoprop and MCPA ('Banlene Plus' at 4.9 l in 220 l).

Seed: Julia, sown at 160 kg.

Cultivations, etc.: - Ploughed: 15 Oct, 1976. Spring-tine cultivated: 7 Mar, 1977. Power harrowed for early sowing: 8 Mar. Power harrowed for late sowing: 25 Apr. Weedkillers applied: 26 May. Combine harvested: 27 Aug. Previous crops: Winter oats 1975 and 1976.

NOTE: Emergence counts were made for both sowings. Mildew was assessed on two occasions. Aphid counts were made on seven occasions and virus scores twice. Tiller counts were made once and grains per ear counted at harvest.

77/R/B/6

GRAIN TONNES/HECTARE

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

| | | | | |
|-------------|------|---------|------|---------|
| FUNGCIDE | NONE | E+T | MEAN | |
| SOW DATE | | | | |
| 8 MAR | 5.84 | 5.87 | 5.86 | |
| 25 APR | 5.79 | 6.59 | 6.19 | |
| MEAN | 5.81 | 6.23 | 6.02 | |
| APHICIDE(1) | NONE | PHORATE | MEAN | |
| SOW DATE | | | | |
| 8 MAR | 5.76 | 5.95 | 5.86 | |
| 25 APR | 5.88 | 6.49 | 6.19 | |
| MEAN | 5.82 | 6.22 | 6.02 | |
| APHICIDE(1) | NONE | PHORATE | MEAN | |
| FUNGCIDE | | | | |
| NONE | 5.60 | 6.02 | 5.81 | |
| E+T | 6.04 | 6.42 | 6.23 | |
| MEAN | 5.82 | 6.22 | 6.02 | |
| APHICIDE(2) | NONE | MENAZON | MEAN | |
| SOW DATE | | | | |
| 8 MAR | 5.80 | 5.91 | 5.86 | |
| 25 APR | 6.21 | 6.16 | 6.19 | |
| MEAN | 6.01 | 6.03 | 6.02 | |
| APHICIDE(2) | NONE | MENAZON | MEAN | |
| FUNGCIDE | | | | |
| NONE | 5.80 | 5.83 | 5.81 | |
| E+T | 6.22 | 6.24 | 6.23 | |
| MEAN | 6.01 | 6.03 | 6.02 | |
| APHICIDE(2) | NONE | MENAZON | MEAN | |
| APHICIDE(1) | | | | |
| NONE | 5.83 | 5.81 | 5.82 | |
| PHORATE | 6.18 | 6.26 | 6.22 | |
| MEAN | 6.01 | 6.03 | 6.02 | |
| FUNGCIDE | NONE | | E+T | |
| APHICIDE(1) | NONE | PHORATE | NONE | PHORATE |
| SOW DATE | | | | |
| 8 MAR | 5.73 | 5.94 | 5.79 | 5.95 |
| 25 APR | 5.47 | 6.10 | 6.28 | 6.89 |
| FUNGCIDE | NONE | | E+T | |
| APHICIDE(2) | NONE | MENAZON | NONE | MENAZON |
| SOW DATE | | | | |
| 8 MAR | 5.80 | 5.88 | 5.81 | 5.94 |
| 25 APR | 5.80 | 5.77 | 6.62 | 6.55 |

77/R/B/6

GRAIN TONNES/HECTARE

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

| APHICIDE(1) | NONE | PHORATE | | |
|-------------|------|---------|------|---------|
| APHICIDE(2) | NONE | MENAZON | NONE | MENAZON |
| SOW DATE | | | | |
| 8 MAR | 5.79 | 5.74 | 5.82 | 6.08 |
| 25 APR | 5.87 | 5.89 | 6.55 | 6.44 |

| APHICIDE(1) | NONE | PHORATE | | |
|-------------|------|---------|------|---------|
| APHICIDE(2) | NONE | MENAZON | NONE | MENAZON |
| FUNGCIDE | | | | |
| NONE | 5.59 | 5.62 | 6.01 | 6.03 |
| E+T | 6.07 | 6.00 | 6.36 | 6.48 |

| APHICIDE(1) | NONE | PHORATE | | | |
|-------------------|------|---------|------|---------|------|
| APHICIDE(2) | NONE | MENAZON | NONE | MENAZON | |
| SOW DATE FUNGCIDE | | | | | |
| 8 MAR | NONE | 5.76 | 5.70 | 5.83 | 6.06 |
| | E+T | 5.81 | 5.77 | 5.81 | 6.10 |
| 25 APR | NONE | 5.41 | 5.54 | 6.19 | 6.01 |
| | E+T | 6.33 | 6.23 | 6.91 | 6.87 |

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

| TABLE | SOW DATE | FUNGCIDE | APHICIDE(1) | APHICIDE(2) |
|-------|----------|----------|-------------|-------------|
| SED | 0.086 | 0.086 | 0.086 | 0.086 |

| TABLE | SOW DATE FUNGCIDE | SOW DATE APHICIDE(1) | FUNGCIDE APHICIDE(1) | SOW DATE APHICIDE(2) |
|-------|-------------------|----------------------|----------------------|----------------------|
| SED | 0.122 | 0.122 | 0.122 | 0.122 |

| TABLE | FUNGCIDE APHICIDE(2) | APHICIDE(1) APHICIDE(2) | SOW DATE FUNGCIDE APHICIDE(1) | SOW DATE FUNGCIDE APHICIDE(2) |
|-------|----------------------|-------------------------|-------------------------------|-------------------------------|
| SED | 0.122 | 0.122 | 0.173 | 0.173 |

| TABLE | SOW DATE APHICIDE(1) APHICIDE(2) | FUNGCIDE APHICIDE(1) APHICIDE(2) | SOW DATE FUNGCIDE APHICIDE(1) APHICIDE(2) |
|-------|----------------------------------|----------------------------------|---|
| SED | 0.173 | 0.173 | 0.244 |

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

| STRATUM | DF | SE | CV% |
|---------------------|---------|-------|-----|
| BLOCK.WP | 30 | 0.299 | 5.0 |
| GRAIN MEAN DM% | 79.3 | | |
| PLOT AREA HARVESTED | 0.00260 | | |