

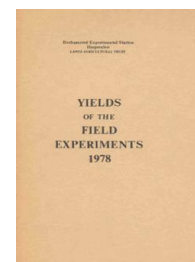
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# Yields of the Field Experiments 1978

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## 78/R/CS/213 Pesticide and Establishment - Ryegrass

### Rothamsted Research

Rothamsted Research (1979) *78/R/CS/213 Pesticide and Establishment - Ryegrass* ; Yields Of The Field Experiments 1978, pp 294 - 308 - DOI: <https://doi.org/10.23637/ERADOC-1-30>

78/R/CS/213

PESTICIDES AND ESTABLISHMENT

Object: To study the effects of pest and disease control and interactions with seedbed condition and seed rates, on establishment and subsequent yield of Italian ryegrass - Long Hoos IV 1.

Sponsor: I.F. Henderson.

The first year, Italian ryegrass.

Design: 3 randomised blocks of 2 plots split into 8.

Whole plot dimensions: 2.44 x 6.10.

Treatments: All combinations of:-

Whole plots

1. SEEDBED                      Seedbed conditions:

FINE  
ROUGH

Sub plots

2. SEEDRATE                      Seed rate, kg:

2  
20

3. FUNGCIDE                      Fungicides, kg:

NONE                      None  
DRAZ+BEN                      Drazoxolon at 0.02 kg + benomyl at 10 kg on 19 Apr, 1978

4. INSCTCDE                      Insecticide, kg:

NONE                      None  
PHORATE                      Phorate at 10 kg on 17 April

NOTES: (1) Phorate was applied as 10% granules.

(2) Drazoxolon was applied as a seed dressing, benomyl was watered on to the seedbed in 672 l.

Basal applications: Manures: (0:14:28) at 720 kg. N at 75 kg, as 'Nitro-Chalk 25' to the seed bed and after the first three cuts. Weedkiller: Paraquat at 0.56 kg ion in 340 l.

Seed: RvP.

Cultivations, etc.: - NPK applied: 29 Sept, 1977. Ploughed: 11 Oct. 'SEEDBED ROUGH' plots rigid-tined, 'SEEDBED FINE' plots power harrowed and rolled: 10 Apr, 1978. Weedkiller applied: 12 Apr. N applied and rotary cultivated after phorate and benomyl applied: 17 Apr. Seed sown: 19 Apr. Cut: 12 July, 11 Aug, 12 Sept, 12 Oct. N applied: 14 July, 15 Aug, 13 Sept. Previous crops: Clover 1976, fallow 1977.

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NOTE: Emergence counts were made on 12 June. The proportions of grass, clover, monocotyledonous and dicotyledonous weeds were determined. The incidence of frit fly *Oscinella frit* larvae were assessed in August and October.

1ST CUT (12/7/78) DRY MATTER TONNES/HECTARE

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

|          |      |          |      |          |
|----------|------|----------|------|----------|
| SEEDRATE | 2    | 20       | MEAN |          |
| SEEDBED  |      |          |      |          |
| FINE     | 4.25 | 4.59     | 4.42 |          |
| ROUGH    | 3.50 | 3.99     | 3.75 |          |
| MEAN     | 3.87 | 4.29     | 4.08 |          |
| FUNGCIDE | NONE | DRAZ+BEN | MEAN |          |
| SEEDBED  |      |          |      |          |
| FINE     | 4.39 | 4.45     | 4.42 |          |
| ROUGH    | 3.82 | 3.67     | 3.75 |          |
| MEAN     | 4.10 | 4.06     | 4.08 |          |
| FUNGCIDE | NONE | DRAZ+BEN | MEAN |          |
| SEEDRATE |      |          |      |          |
| 2        | 3.91 | 3.84     | 3.87 |          |
| 20       | 4.30 | 4.28     | 4.29 |          |
| MEAN     | 4.10 | 4.06     | 4.08 |          |
| INSCTCDE | NONE | PHORATE  | MEAN |          |
| SEEDBED  |      |          |      |          |
| FINE     | 4.40 | 4.44     | 4.42 |          |
| ROUGH    | 3.47 | 4.02     | 3.75 |          |
| MEAN     | 3.94 | 4.23     | 4.08 |          |
| INSCTCDE | NONE | PHORATE  | MEAN |          |
| SEEDRATE |      |          |      |          |
| 2        | 3.81 | 3.94     | 3.87 |          |
| 20       | 4.06 | 4.52     | 4.29 |          |
| MEAN     | 3.94 | 4.23     | 4.08 |          |
| INSCTCDE | NONE | PHORATE  | MEAN |          |
| FUNGCIDE |      |          |      |          |
| NONE     | 3.84 | 4.37     | 4.10 |          |
| DRAZ+BEN | 4.03 | 4.09     | 4.06 |          |
| MEAN     | 3.94 | 4.23     | 4.08 |          |
| SEEDRATE | 2    | 20       |      |          |
| FUNGCIDE | NONE | DRAZ+BEN | NONE | DRAZ+BEN |
| SEEDBED  |      |          |      |          |
| FINE     | 4.21 | 4.28     | 4.56 | 4.62     |
| ROUGH    | 3.61 | 3.39     | 4.04 | 3.95     |

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1ST CUT (12/7/78) DRY MATTER TONNES/HECTARE

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

|          |      |         |      |         |
|----------|------|---------|------|---------|
| SEEDRATE | 2    |         | 20   |         |
| INSCTCDE | NONE | PHORATE | NONE | PHORATE |
| SEEDBED  |      |         |      |         |
| FINE     | 4.44 | 4.06    | 4.37 | 4.81    |
| ROUGH    | 3.19 | 3.81    | 3.76 | 4.23    |

|          |      |         |          |         |
|----------|------|---------|----------|---------|
| FUNGCIDE | NONE |         | DRAZ+BEN |         |
| INSCTCDE | NONE | PHORATE | NONE     | PHORATE |
| SEEDBED  |      |         |          |         |
| FINE     | 4.25 | 4.52    | 4.55     | 4.35    |
| ROUGH    | 3.43 | 4.22    | 3.52     | 3.82    |

|          |      |         |          |         |
|----------|------|---------|----------|---------|
| FUNGCIDE | NONE |         | DRAZ+BEN |         |
| INSCTCDE | NONE | PHORATE | NONE     | PHORATE |
| SEEDRATE |      |         |          |         |
| 2        | 3.73 | 4.09    | 3.89     | 3.78    |
| 20       | 3.95 | 4.64    | 4.17     | 4.39    |

|         | FUNGCIDE | NONE |         | DRAZ+BEN |         |
|---------|----------|------|---------|----------|---------|
|         | INSCODE  | NONE | PHORATE | NONE     | PHORATE |
| SEEDBED | SEEDRATE |      |         |          |         |
| FINE    | 2        | 4.31 | 4.11    | 4.56     | 4.01    |
|         | 20       | 4.19 | 4.92    | 4.54     | 4.70    |
| ROUGH   | 2        | 3.15 | 4.07    | 3.22     | 3.55    |
|         | 20       | 3.71 | 4.37    | 3.81     | 4.08    |

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

|       |          |          |          |
|-------|----------|----------|----------|
| TABLE | SEEDRATE | FUNGCIDE | INSCTCDE |
| SED   | 0.130    | 0.130    | 0.130    |

|       |                      |                      |                      |                      |
|-------|----------------------|----------------------|----------------------|----------------------|
| TABLE | SEEDBED*<br>SEEDRATE | SEEDBED*<br>FUNGCIDE | SEEDRATE<br>FUNGCIDE | SEEDBED*<br>INSCTCDE |
| SED   | 0.184                | 0.184                | 0.184                | 0.184                |

|       |                      |                      |                                  |                                  |
|-------|----------------------|----------------------|----------------------------------|----------------------------------|
| TABLE | SEEDRATE<br>INSCTCDE | FUNGCIDE<br>INSCTCDE | SEEDBED*<br>SEEDRATE<br>FUNGCIDE | SEEDBED*<br>SEEDRATE<br>INSCTCDE |
| SED   | 0.184                | 0.184                | 0.261                            | 0.261                            |

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1ST CUT (12/7/78) DRY MATTER TONNES/HECTARE

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

| TABLE                                                         | SEEDBED*<br>FUNGIDE<br>INSCTCDE | SEEDRATE<br>FUNGIDE<br>INSCTCDE | SEEDBED*<br>SEEDRATE<br>FUNGIDE<br>INSCTCDE |
|---------------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------------------|
| SED                                                           | 0.261                           | 0.261                           | 0.369                                       |
| EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:<br>SEEDBED | 0.261                           |                                 | 0.369                                       |

\* WITHIN SAME LEVEL OF SEEDBED ONLY

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

| STRATUM     | DF | SE    | CV%  |
|-------------|----|-------|------|
| BLOCK.WP.SP | 28 | 0.451 | 11.1 |

1ST CUT MEAN DM% 20.1

2ND CUT (11/8/78) DRY MATTER TONNES/HECTARE

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

|          |      |          |      |
|----------|------|----------|------|
| SEEDRATE | 2    | 20       | MEAN |
| SEEDBED  |      |          |      |
| FINE     | 1.26 | 2.28     | 1.77 |
| ROUGH    | 1.12 | 1.88     | 1.50 |
| MEAN     | 1.19 | 2.08     | 1.63 |
| FUNGIDE  | NONE | DRAZ+BEN | MEAN |
| SEEDBED  |      |          |      |
| FINE     | 1.79 | 1.75     | 1.77 |
| ROUGH    | 1.52 | 1.47     | 1.50 |
| MEAN     | 1.66 | 1.61     | 1.63 |
| FUNGIDE  | NONE | DRAZ+BEN | MEAN |
| SEEDRATE |      |          |      |
| 2        | 1.24 | 1.14     | 1.19 |
| 20       | 2.08 | 2.08     | 2.08 |
| MEAN     | 1.66 | 1.61     | 1.63 |
| INSCTCDE | NONE | PHORATE  | MEAN |
| SEEDBED  |      |          |      |
| FINE     | 1.53 | 2.02     | 1.77 |
| ROUGH    | 1.32 | 1.67     | 1.50 |
| MEAN     | 1.42 | 1.85     | 1.63 |

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2ND CUT (11/8/78) DRY MATTER TONNES/HECTARE

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

| INSCTCDE | NONE | PHORATE | MEAN |
|----------|------|---------|------|
| SEEDRATE |      |         |      |
| 2        | 0.92 | 1.46    | 1.19 |
| 20       | 1.93 | 2.23    | 2.08 |
| MEAN     | 1.42 | 1.85    | 1.63 |

| INSCTCDE | NONE | PHORATE | MEAN |
|----------|------|---------|------|
| FUNGCIDE |      |         |      |
| NONE     | 1.41 | 1.90    | 1.66 |
| DRAZ+BEN | 1.43 | 1.79    | 1.61 |
| MEAN     | 1.42 | 1.85    | 1.63 |

| SEEDRATE | 2    | 20       |
|----------|------|----------|
| FUNGCIDE | NONE | DRAZ+BEN |
| SEEDBED  |      |          |
| FINE     | 1.31 | 1.21     |
| ROUGH    | 1.16 | 1.07     |

| SEEDRATE | 2    | 20      |
|----------|------|---------|
| INSCTCDE | NONE | PHORATE |
| SEEDBED  |      |         |
| FINE     | 0.94 | 1.58    |
| ROUGH    | 0.90 | 1.33    |

| FUNGCIDE | NONE | DRAZ+BEN |
|----------|------|----------|
| INSCTCDE | NONE | PHORATE  |
| SEEDBED  |      |          |
| FINE     | 1.55 | 2.04     |
| ROUGH    | 1.28 | 1.76     |

| FUNGCIDE | NONE | DRAZ+BEN |
|----------|------|----------|
| INSCTCDE | NONE | PHORATE  |
| SEEDRATE |      |          |
| 2        | 0.96 | 1.52     |
| 20       | 1.87 | 2.29     |

| FUNGCIDE | NONE | DRAZ+BEN |
|----------|------|----------|
| INSCTCDE | NONE | PHORATE  |
| SEEDBED  |      |          |
| FINE     | 2    | 0.99     |
| 20       | 2.10 | 2.44     |
| ROUGH    | 2    | 0.93     |
| 20       | 1.63 | 2.14     |

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2ND CUT (11/8/78) DRY MATTER TONNES/HECTARE

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

|       |                                  |                                  |                                              |                                  |
|-------|----------------------------------|----------------------------------|----------------------------------------------|----------------------------------|
| TABLE |                                  | SEEDRATE                         | FUNGCIDE                                     | INSCTCDE                         |
| SED   |                                  | 0.062                            | 0.062                                        | 0.062                            |
| TABLE | SEEDBED*<br>SEEDRATE             | SEEDBED*<br>FUNGCIDE             | SEEDRATE<br>FUNGCIDE                         | SEEDBED*<br>INSCTCDE             |
| SED   | 0.088                            | 0.088                            | 0.088                                        | 0.088                            |
| TABLE | SEEDRATE<br>INSCTCDE             | FUNGCIDE<br>INSCTCDE             | SEEDBED*<br>SEEDRATE<br>FUNGCIDE             | SEEDBED*<br>SEEDRATE<br>INSCTCDE |
| SED   | 0.088                            | 0.088                            | 0.124                                        | 0.124                            |
| TABLE | SEEDBED*<br>FUNGCIDE<br>INSCTCDE | SEEDRATE<br>FUNGCIDE<br>INSCTCDE | SEEDBED*<br>SEEDRATE<br>FUNGCIDE<br>INSCTCDE |                                  |
| SED   | 0.124                            | 0.124                            | 0.176                                        |                                  |

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

| STRATUM     | DF | SE    | CV%  |
|-------------|----|-------|------|
| BLOCK.WP.SP | 28 | 0.215 | 13.2 |

2ND CUT MEAN DM% 14.2

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3RD CUT (12/9/78) DRY MATTER TONNES/HECTARE

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

|          |      |      |      |
|----------|------|------|------|
| SEEDRATE | 2    | 20   | MEAN |
| SEEDBED  |      |      |      |
| FINE     | 2.01 | 2.35 | 2.18 |
| ROUGH    | 1.90 | 2.13 | 2.02 |
| MEAN     | 1.96 | 2.24 | 2.10 |

|          |      |          |      |
|----------|------|----------|------|
| FUNGCIDE | NONE | DRAZ+BEN | MEAN |
| SEEDBED  |      |          |      |
| FINE     | 2.14 | 2.22     | 2.18 |
| ROUGH    | 2.08 | 1.96     | 2.02 |
| MEAN     | 2.11 | 2.09     | 2.10 |

|          |      |          |      |
|----------|------|----------|------|
| FUNGCIDE | NONE | DRAZ+BEN | MEAN |
| SEEDRATE |      |          |      |
| 2        | 2.01 | 1.91     | 1.96 |
| 20       | 2.22 | 2.26     | 2.24 |
| MEAN     | 2.11 | 2.09     | 2.10 |

|           |      |         |      |
|-----------|------|---------|------|
| INSECTCDE | NONE | PHORATE | MEAN |
| SEEDBED   |      |         |      |
| FINE      | 2.03 | 2.34    | 2.18 |
| ROUGH     | 1.84 | 2.19    | 2.02 |
| MEAN      | 1.94 | 2.26    | 2.10 |

|           |      |         |      |
|-----------|------|---------|------|
| INSECTCDE | NONE | PHORATE | MEAN |
| SEEDRATE  |      |         |      |
| 2         | 1.76 | 2.16    | 1.96 |
| 20        | 2.11 | 2.37    | 2.24 |
| MEAN      | 1.94 | 2.26    | 2.10 |

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3RD CUT (12/9/78) DRY MATTER TONNES/HECTARE

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

|          |          |          |          |          |         |
|----------|----------|----------|----------|----------|---------|
| INSCTCDE | NONE     | PHORATE  | MEAN     |          |         |
| FUNGCIDE |          |          |          |          |         |
| NONE     | 1.90     | 2.32     | 2.11     |          |         |
| DRAZ+BEN | 1.97     | 2.21     | 2.09     |          |         |
| MEAN     | 1.94     | 2.26     | 2.10     |          |         |
| SEEDRATE | 2        |          | 20       |          |         |
| FUNGCIDE | NONE     | DRAZ+BEN | NONE     | DRAZ+BEN |         |
| SEEDBED  |          |          |          |          |         |
| FINE     | 2.05     | 1.98     | 2.24     | 2.46     |         |
| ROUGH    | 1.96     | 1.84     | 2.19     | 2.07     |         |
| SEEDRATE | 2        |          | 20       |          |         |
| INSCTCDE | NONE     | PHORATE  | NONE     | PHORATE  |         |
| SEEDBED  |          |          |          |          |         |
| FINE     | 1.87     | 2.16     | 2.19     | 2.52     |         |
| ROUGH    | 1.66     | 2.15     | 2.03     | 2.23     |         |
| FUNGCIDE | NONE     |          | DRAZ+BEN |          |         |
| INSCTCDE | NONE     | PHORATE  | NONE     | PHORATE  |         |
| SEEDBED  |          |          |          |          |         |
| FINE     | 1.97     | 2.32     | 2.09     | 2.36     |         |
| ROUGH    | 1.84     | 2.32     | 1.85     | 2.06     |         |
| FUNGCIDE | NONE     |          | DRAZ+BEN |          |         |
| INSCTCDE | NONE     | PHORATE  | NONE     | PHORATE  |         |
| SEEDRATE |          |          |          |          |         |
| 2        | 1.76     | 2.25     | 1.77     | 2.06     |         |
| 20       | 2.05     | 2.39     | 2.17     | 2.36     |         |
|          | FUNGCIDE | NONE     | DRAZ+BEN |          |         |
|          | INSCTCDE | NONE     | PHORATE  | NONE     | PHORATE |
| SEEDBED  | SEEDRATE |          |          |          |         |
| FINE     | 2        | 1.83     | 2.26     | 1.91     | 2.06    |
|          | 20       | 2.10     | 2.38     | 2.27     | 2.66    |
| ROUGH    | 2        | 1.69     | 2.24     | 1.63     | 2.06    |
|          | 20       | 1.99     | 2.39     | 2.07     | 2.06    |

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3RD CUT (12/9/78) DRY MATTER TONNES/HECTARE

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

| TABLE | SEEDRATE | FUNGCIDE | INSCTCDE |
|-------|----------|----------|----------|
| SED   | 0.059    | 0.059    | 0.059    |

| TABLE | SEEDBED*<br>SEEDRATE | SEEDBED*<br>FUNGCIDE | SEEDRATE<br>FUNGCIDE | SEEDBED*<br>INSCTCDE |
|-------|----------------------|----------------------|----------------------|----------------------|
| SED   | 0.083                | 0.083                | 0.083                | 0.083                |

| TABLE | SEEDRATE<br>INSCTCDE | FUNGCIDE<br>INSCTCDE | SEEDBED*<br>SEEDRATE<br>FUNGCIDE | SEEDBED*<br>SEEDRATE<br>INSCTCDE |
|-------|----------------------|----------------------|----------------------------------|----------------------------------|
| SED   | 0.083                | 0.083                | 0.118                            | 0.118                            |

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:

| TABLE | SEEDBED*<br>FUNGCIDE<br>INSCTCDE | SEEDRATE<br>FUNGCIDE<br>INSCTCDE | SEEDBED*<br>SEEDRATE<br>FUNGCIDE<br>INSCTCDE |
|-------|----------------------------------|----------------------------------|----------------------------------------------|
| SED   | 0.118                            | 0.118                            | 0.167                                        |

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

| STRATUM     | DF | SE    | CV% |
|-------------|----|-------|-----|
| BLOCK.WP.SP | 28 | 0.204 | 9.7 |

3RD CUT MEAN DM% 20.3

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4TH CUT (12/10/78) DRY MATTER TONNES/HECTARE

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

|          |      |      |      |
|----------|------|------|------|
| SEEDRATE | 2    | 20   | MEAN |
| SEEDBED  |      |      |      |
| FINE     | 0.87 | 1.08 | 0.98 |
| ROUGH    | 0.82 | 1.05 | 0.93 |
| MEAN     | 0.85 | 1.07 | 0.96 |

|          |      |          |      |
|----------|------|----------|------|
| FUNGCIDE | NONE | DRAZ+BEN | MEAN |
| SEEDBED  |      |          |      |
| FINE     | 0.97 | 0.99     | 0.98 |
| ROUGH    | 0.94 | 0.93     | 0.93 |
| MEAN     | 0.96 | 0.96     | 0.96 |

|          |      |          |      |
|----------|------|----------|------|
| FUNGCIDE | NONE | DRAZ+BEN | MEAN |
| SEEDRATE |      |          |      |
| 2        | 0.85 | 0.85     | 0.85 |
| 20       | 1.06 | 1.07     | 1.07 |
| MEAN     | 0.96 | 0.96     | 0.96 |

|           |      |         |      |
|-----------|------|---------|------|
| INSECTCDE | NONE | PHORATE | MEAN |
| SEEDBED   |      |         |      |
| FINE      | 0.93 | 1.03    | 0.98 |
| ROUGH     | 0.89 | 0.98    | 0.93 |
| MEAN      | 0.91 | 1.01    | 0.96 |

|           |      |         |      |
|-----------|------|---------|------|
| INSECTCDE | NONE | PHORATE | MEAN |
| SEEDRATE  |      |         |      |
| 2         | 0.78 | 0.92    | 0.85 |
| 20        | 1.03 | 1.10    | 1.07 |
| MEAN      | 0.91 | 1.01    | 0.96 |

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4TH CUT (12/10/78) DRY MATTER TONNES/HECTARE

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

|          |          |          |          |          |      |
|----------|----------|----------|----------|----------|------|
| INSCDE   | NONE     | PHORATE  | MEAN     |          |      |
| FUNGCIDE |          |          |          |          |      |
| NONE     | 0.88     | 1.03     | 0.96     |          |      |
| DRAZ+BEN | 0.93     | 0.98     | 0.96     |          |      |
| MEAN     | 0.91     | 1.01     | 0.96     |          |      |
| SEEDRATE | 2        |          | 20       |          |      |
| FUNGCIDE | NONE     | DRAZ+BEN | NONE     | DRAZ+BEN |      |
| SEEDBED  |          |          |          |          |      |
| FINE     | 0.86     | 0.88     | 1.07     | 1.10     |      |
| ROUGH    | 0.83     | 0.81     | 1.05     | 1.04     |      |
| SEEDRATE | 2        |          | 20       |          |      |
| INSCDE   | NONE     | PHORATE  | NONE     | PHORATE  |      |
| SEEDBED  |          |          |          |          |      |
| FINE     | 0.81     | 0.93     | 1.04     | 1.13     |      |
| ROUGH    | 0.74     | 0.90     | 1.03     | 1.06     |      |
| FUNGCIDE | NONE     |          | DRAZ+BEN |          |      |
| INSCDE   | NONE     | PHORATE  | NONE     | PHORATE  |      |
| SEEDBED  |          |          |          |          |      |
| FINE     | 0.91     | 1.03     | 0.94     | 1.03     |      |
| ROUGH    | 0.86     | 1.03     | 0.91     | 0.94     |      |
| FUNGCIDE | NONE     |          | DRAZ+BEN |          |      |
| INSCDE   | NONE     | PHORATE  | NONE     | PHORATE  |      |
| SEEDRATE |          |          |          |          |      |
| 2        | 0.75     | 0.95     | 0.81     | 0.88     |      |
| 20       | 1.01     | 1.11     | 1.05     | 1.08     |      |
|          | FUNGCIDE | NONE     | DRAZ+BEN |          |      |
|          | INSCDE   | NONE     | PHORATE  | NONE     |      |
| SEEDBED  | SEEDRATE |          |          | PHORATE  |      |
| FINE     | 2        | 0.77     | 0.96     | 0.85     | 0.90 |
|          | 20       | 1.04     | 1.11     | 1.04     | 1.15 |
| ROUGH    | 2        | 0.72     | 0.94     | 0.76     | 0.86 |
|          | 20       | 0.99     | 1.12     | 1.07     | 1.01 |

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4TH CUT (12/10/78) DRY MATTER TONNES/HECTARE

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

|       |                                  |                                  |                                              |                                  |
|-------|----------------------------------|----------------------------------|----------------------------------------------|----------------------------------|
| TABLE |                                  | SEEDRATE                         | FUNGCIDE                                     | INSCTCDE                         |
| SED   |                                  | 0.031                            | 0.031                                        | 0.031                            |
| TABLE | SEEDBED*<br>SEEDRATE             | SEEDBED*<br>FUNGCIDE             | SEEDRATE<br>FUNGCIDE                         | SEEDBED*<br>INSCTCDE             |
| SED   | 0.043                            | 0.043                            | 0.043                                        | 0.043                            |
| TABLE | SEEDRATE<br>INSCTCDE             | FUNGCIDE<br>INSCTCDE             | SEEDBED*<br>SEEDRATE<br>FUNGCIDE             | SEEDBED*<br>SEEDRATE<br>INSCTCDE |
| SED   | 0.043                            | 0.043                            | 0.061                                        | 0.061                            |
| TABLE | SEEDBED*<br>FUNGCIDE<br>INSCTCDE | SEEDRATE<br>FUNGCIDE<br>INSCTCDE | SEEDBED*<br>SEEDRATE<br>FUNGCIDE<br>INSCTCDE |                                  |
| SED   | 0.061                            | 0.061                            | 0.087                                        |                                  |

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

| STRATUM     | DF | SE    | CV%  |
|-------------|----|-------|------|
| BLOCK.WP.SP | 28 | 0.106 | 11.1 |

4TH CUT MEAN DM% 18.2

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TOTAL OF 4 CUTS DRY MATTER TONNES/HECTARE

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

|           |      |          |      |
|-----------|------|----------|------|
| SEEDRATE  | 2    | 20       | MEAN |
| SEEDBED   |      |          |      |
| FINE      | 8.40 | 10.31    | 9.35 |
| ROUGH     | 7.34 | 9.04     | 8.19 |
| MEAN      | 7.87 | 9.68     | 8.77 |
| FUNGCIDE  | NONE | DRAZ+BEN | MEAN |
| SEEDBED   |      |          |      |
| FINE      | 9.29 | 9.41     | 9.35 |
| ROUGH     | 8.37 | 8.02     | 8.19 |
| MEAN      | 8.83 | 8.71     | 8.77 |
| FUNGCIDE  | NONE | DRAZ+BEN | MEAN |
| SEEDRATE  |      |          |      |
| 2         | 8.00 | 7.73     | 7.87 |
| 20        | 9.66 | 9.70     | 9.68 |
| MEAN      | 8.83 | 8.71     | 8.77 |
| INSECTCDE | NONE | PHORATE  | MEAN |
| SEEDBED   |      |          |      |
| FINE      | 8.88 | 9.82     | 9.35 |
| ROUGH     | 7.52 | 8.86     | 8.19 |
| MEAN      | 8.20 | 9.34     | 8.77 |
| INSECTCDE | NONE | PHORATE  | MEAN |
| SEEDRATE  |      |          |      |
| 2         | 7.27 | 8.46     | 7.87 |
| 20        | 9.13 | 10.22    | 9.68 |
| MEAN      | 8.20 | 9.34     | 8.77 |

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TOTAL OF 4 CUTS DRY MATTER TONNES/HECTARE

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

|          |          |          |          |          |
|----------|----------|----------|----------|----------|
| INSCTCDE | NONE     | PHORATE  | MEAN     |          |
| FUNGCIDE |          |          |          |          |
| NONE     | 8.04     | 9.62     | 8.83     |          |
| DRAZ+BEN | 8.36     | 9.07     | 8.71     |          |
| MEAN     | 8.20     | 9.34     | 8.77     |          |
| SEEDRATE | 2        |          | 20       |          |
| FUNGCIDE | NONE     | DRAZ+BEN | NONE     | DRAZ+BEN |
| SEEDBED  |          |          |          |          |
| FINE     | 8.44     | 8.35     | 10.14    | 10.47    |
| ROUGH    | 7.57     | 7.11     | 9.17     | 8.92     |
| SEEDRATE | 2        |          | 20       |          |
| INSCTCDE | NONE     | PHORATE  | NONE     | PHORATE  |
| SEEDBED  |          |          |          |          |
| FINE     | 8.06     | 8.73     | 9.71     | 10.91    |
| ROUGH    | 6.49     | 8.19     | 8.56     | 9.53     |
| FUNGCIDE | NONE     |          | DRAZ+BEN |          |
| INSCTCDE | NONE     | PHORATE  | NONE     | PHORATE  |
| SEEDBED  |          |          |          |          |
| FINE     | 8.67     | 9.91     | 9.09     | 9.74     |
| ROUGH    | 7.41     | 9.33     | 7.63     | 8.40     |
| FUNGCIDE | NONE     |          | DRAZ+BEN |          |
| INSCTCDE | NONE     | PHORATE  | NONE     | PHORATE  |
| SEEDRATE |          |          |          |          |
| 2        | 7.20     | 8.80     | 7.34     | 8.13     |
| 20       | 8.88     | 10.43    | 9.38     | 10.01    |
|          | FUNGCIDE | NONE     | DRAZ+BEN |          |
|          | INSCTCDE | NONE     | PHORATE  | NONE     |
|          | SEEDBED  |          |          | PHORATE  |
| FINE     | 2        | 7.91     | 8.97     | 8.20     |
|          | 20       | 9.44     | 10.84    | 9.97     |
| ROUGH    | 2        | 6.49     | 8.64     | 6.48     |
|          | 20       | 8.33     | 10.01    | 8.78     |
|          |          |          |          | 9.05     |

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TOTAL OF 4 CUTS DRY MATTER TONNES/HECTARE

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

|       |                                  |                                  |                                              |                                  |
|-------|----------------------------------|----------------------------------|----------------------------------------------|----------------------------------|
| TABLE |                                  | SEEDRATE                         | FUNGCIDE                                     | INSCTCDE                         |
| SED   |                                  | 0.146                            | 0.146                                        | 0.146                            |
| TABLE | SEEDBED*<br>SEEDRATE             | SEEDBED*<br>FUNGCIDE             | SEEDRATE<br>FUNGCIDE                         | SEEDBED*<br>INSCTCDE             |
| SED   | 0.206                            | 0.206                            | 0.206                                        | 0.206                            |
| TABLE | SEEDRATE<br>INSCTCDE             | FUNGCIDE<br>INSCTCDE             | SEEDBED*<br>SEEDRATE<br>FUNGCIDE             | SEEDBED*<br>SEEDRATE<br>INSCTCDE |
| SED   | 0.206                            | 0.206                            | 0.292                                        | 0.292                            |
| TABLE | SEEDBED*<br>FUNGCIDE<br>INSCTCDE | SEEDRATE<br>FUNGCIDE<br>INSCTCDE | SEEDBED*<br>SEEDRATE<br>FUNGCIDE<br>INSCTCDE |                                  |
| SED   | 0.292                            | 0.292                            | 0.412                                        |                                  |

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

| STRATUM     | DF | SE    | CV% |
|-------------|----|-------|-----|
| BLOCK.WP.SP | 28 | 0.505 | 5.8 |

TOTAL OF 4 CUTS MEAN DM% 18.2