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# Yields of the Field Experiments 1974

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## 74/R/CS/107 Varieties and Pathogens - Ryegrass

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74/R/CS/107

# VARIETIES AND PATHOGENS

Object: To compare the yields and susceptibilities to diseases of a range of Italian and Perennial Ryegrass varieties - Long Hoos IV.

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

The second year, Italian and perennial ryegrass.

For previous year see 73/R/CS/107.

Design: 2 blocks of 2 whole plots split into 5 (Italian), 6 (Perennial) sub plots.

Whole plot dimensions: Italian - 13.1 x 6.10, perennial - 15.8 x 6.10.  
Sub plot area harvested: 0.00056.

## Treatments:-

|                                |           |
|--------------------------------|-----------|
| Whole plots: 1. Ryegrass type: | TYPE      |
| Italian                        | Italian   |
| Perennial                      | Perennial |

|                                          |         |
|------------------------------------------|---------|
| Sub plots: 2. Varieties and sowing time: | VARIETY |
|------------------------------------------|---------|

Italian varieties (sown autumn 1972 except where stated):

|                          |         |
|--------------------------|---------|
| Asso, sown spring 1973   | Asso(S) |
| Grasslands Manawa        | Manawa  |
| R.V.P.                   | RVP     |
| R.V.P., sown spring 1973 | RVP(S)  |
| S.22                     | S.22    |

Perennial varieties (all sown autumn 1972):

|                 |          |
|-----------------|----------|
| Endura          | Endura   |
| Glasnevin Leafy | Glasnevi |
| Gremie          | Gremie   |
| Monta C.I.V.    | Monta    |
| Reveille        | Reveille |
| S.24            | S.24     |

Basal applications: Manures: (0:14:28) at 900 kg. (25:0:16) at 300 kg in spring and after each cut except the last.

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Cultivations, etc.:— PK applied: 7 Mar, 1974. NK applied: 7 Mar, 7 June, 5 Aug. Cut: 5 June, 31 July and 10 Jan, 1975.

- NOTES: (1) Counts of mites (*Abacarus hystrix*) were made on 19 July, 16 Sept, 21 Oct.  
(2) Assessments of infection by Ryegrass Mosaic Virus were made on 21 May, 4 June, 25 July.  
(3) Observations were made on foliar diseases.

Standard errors per sub plot. Dry matter: tonnes/hectare.

|                  |                        |
|------------------|------------------------|
| 1st cut:         | 0.334 or 4.2% (9 d.f.) |
| 2nd cut:         | 0.304 or 8.5% (9 d.f.) |
| 3rd cut:         | 0.159 or 7.3% (9 d.f.) |
| Total of 3 cuts: | 0.436 or 3.2% (9 d.f.) |

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## TABLES OF MEANS

DRY MATTER: TONNES/HECTARE

| TYPE | Manawa | Italian RVP | RVP(S) | S22   | Endura            | Glasnevi | Gremie | Monta | Reveille | S24   | Mean  |
|------|--------|-------------|--------|-------|-------------------|----------|--------|-------|----------|-------|-------|
|      |        |             |        |       |                   |          |        |       |          |       |       |
|      |        |             |        |       | 1ST CUT (5/6/74)  |          |        |       |          |       |       |
|      | 8.50   | 8.70        | 8.34   | 8.11  | 8.55              | 6.32     | 6.94   | 8.41  | 8.36     | 6.70  | 8.03  |
|      |        |             |        |       | 2ND CUT (31/7/74) |          |        |       |          |       |       |
|      | 3.78   | 4.17        | 4.13   | 3.86  | 4.19              | 3.98     | 2.86   | 2.70  | 3.49     | 2.64  | 3.59  |
|      |        |             |        |       | 3RD CUT (10/1/75) |          |        |       |          |       |       |
|      | 2.54   | 2.34        | 2.40   | 2.54  | 1.90              | 2.62     | 2.11   | 1.54  | 1.98     | 1.45  | 2.18  |
|      |        |             |        |       | TOTAL OF 3 CUTS   |          |        |       |          |       |       |
|      | 14.83  | 15.21       | 14.88  | 14.51 | 14.63             | 12.91    | 11.90  | 12.65 | 13.83    | 10.78 | 13.80 |

STANDARD ERRORS OF DIFFERENCES. For use only in comparisons within the same TYPE

|                  |       |             |      |
|------------------|-------|-------------|------|
| 1st cut:         | 0.334 | Mean D.M. % | 29.7 |
| 2nd cut:         | 0.304 |             | 29.8 |
| 3rd cut:         | 0.159 |             | 29.1 |
| Total of 3 cuts: | 0.436 |             | 29.5 |