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RYEGRASS, 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 first year, Italian and perennial ryegrass.

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

Whole plot dimensions: 2.13 x 6.10. Sub plot area harvested: 0.00056.

Treatments:-

Whole plots: 1. Ryegrass type:-

TYPE

Italian
Perennial

Italian
Perennial

Sub plots: 2. Varieties and sowing time:-

VARIETY

Italian varieties (sown autumn 1972 except where stated):

Asso, sown spring 1973
Grasslands Manawa
R.V.P.
R.V.P., sown spring 1973
S.22

Asso(S)
Manawa
RVP
RVP(S)
S.22

Perennial varieties (all sown autumn 1972):

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

Endura
Glasnevi
Gremie
Monta
Reveille
S.24

Basal applications: Manures: (0:14:28) at 900 kg. 'Nitro-Chalk' at 150 kg before sowing. (25:0:16) at 300 kg in spring and after each cut except the last.

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Seed: Sown at 45 kg.

Cultivations, etc.:— Basal N and PK applied, rotary cultivated: 3 Oct, 1972.
Seed sown (except Asso and RVP(S)): 12 Oct. NK applied to all sown plots:
9 Apr, 1973. Power harrowed, Asso(S) and RVP(S) sown: 27 Apr. Autumn
sown plots cut: 7 June. NK applied to all plots: 18 June, 25 July.
All plots cut: 18 July, 12 Sept, 23 Oct. Previous crops: Winter wheat
1971 and 1972.

NOTES: (1) Scores for Ryegrass Mosaic Virus and Crown Rust (*Puccinia coronata*) were made between third and fourth cuts.
(2) Asso(S) and RVP(S) were not ready to cut until 18 July.
(3) Spring sown plots did not receive basal N in seedbed or NK in spring.

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

1st cut:	0.331 or 7.0% (9 d.f.)
2nd cut:	0.324 or 9.2% (9 d.f.)
3rd cut:	0.210 or 8.5% (9 d.f.)
4th cut:	0.070 or 4.8% (9 d.f.)
Total of 4 cuts:	0.493 or 4.1% (9 d.f.)

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TABLES OF MEANS

DRY MATTER: TONNES/HECTARE

TYPE VARIETY	Italian		S22	Perennial				Near				
	Anso(S)	Manawa RVP		Endura	Glasnevi	Gremie Monta	Reveille S24					
	0.00	6.26	6.25	0.00	6.57	4.53	5.84	5.96	5.69	4.71	5.99	4.70
	4.23	4.36	4.61	3.92	3.99	3.37	2.59	2.86	3.09	2.86	2.72	3.51
	2.86	3.01	2.67	2.77	2.37	2.54	2.39	2.26	2.16	1.78	2.48	2.48
	1.23	1.26	1.44	1.52	1.30	1.62	1.38	1.49	1.50	1.65	1.54	1.45
	8.33	14.90	14.97	8.21	14.22	12.05	12.20	12.58	12.45	11.01	12.64	12.14

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

1st cut	0.331	Mean D.M. %	14.4
2nd cut	0.324		15.3
3rd cut	0.210		36.7
4th cut	0.070		16.1
Total of 4 cuts	0.493		20.6