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78/R/CS/162 Times of Applying Acaricide - Ryegrass

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78/R/CS/162

TIMES OF APPLYING ACARICIDE

Object: To study the effects of applying the acaricide endosulfan, on the incidence of ryegrass mosaic virus and its mite vectors and on the yield of Italian and perennial ryegrass sown separately and in mixtures - Claycroft.

Sponsors: R.W. Gibson, R.T. Plumb.

The fourth year, ryegrass. First year of new scheme.

For previous years see 75-77/R/CS/162.

Design: Originally 4 randomised blocks of 18 plots - 9 plots Italian ryegrass and 9 plots perennial ryegrass. In 1978 plots previously in Italian ryegrass were sown in summer, plots previously in perennial ryegrass were fallowed, after failure of autumn 1977 sowings, to be resown in autumn 1978. Design for each sowing: 6 blocks of 6 plots with ACARICID on blocks.

Whole plot dimensions: 4.27 x 6.10.

Treatments (to summer sowing only): All combinations of:-

Blocks

1. ACARICID	Acaricide:
NONE	None
ENDOSULF	Endosulfan

Plots

2. VARIETY	Varieties and mixtures (proportions by weight)
I5 -	Italian ryegrass (RvP)
- P5	Perennial ryegrass (S24)
I1 P4	20% RvP : 80% S24
I2 P3	40% RvP : 60% S24
I3 P2	60% RvP : 40% S24
I4 P1	80% RvP : 20% S24

NOTES: (1) All plots were sown at 30 kg.

(2) Endosulfan was applied at 0.28 kg in 340 l on 18 Aug, 1978.

Standard applications:

To all plots: Manures: (0:14:28) at 500 kg. (25:0:16) at 810 kg. Weedkiller: Paraquat at 0.84 kg ion in 220 l. Irrigation: TOTAL 25 mm (12.5 mm on 14 and 19 June).

To plots sown in summer 1978: Manures: (25:0:16) at 600 kg after the first cut.

To plots fallow in summer 1978: Weedkiller: Paraquat at 0.56 kg ion in 220 l.

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Cultivations, etc.:-

- To all plots: Autumn PK applied: 6 Jan, 1978. Spring NK applied: 7 Mar.
- Weedkiller applied: 4 May. Heavy spring-tine cultivated twice: 18 May.
- Rotary harrowed three times: 22 May. Rolled: 23 May.
- To plots sown in summer 1978: Seed sown by hand, harrowed, and rolled in: 6 June. Grass cut: 15 Aug and 31 Oct. NK applied: 16 Aug.
- To plots fallow in summer 1978: Weedkiller applied: 26 Sept, 1977. Heavy spring-tine cultivated twice, and rotary harrowed: 3 Oct. Seed sown by hand, and spring-tine cultivated in: 14 Oct. The crop failed to establish adequately and was destroyed in May 1978 (see above). Cultivated with thistle bar: 20 July.

NOTE: Mite numbers, virus incidence and sward composition were assessed during the season.

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1ST CUT (15/8/78) DRY MATTER TONNES/HECTARE

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

VARIETY	I5 -	- P5	I1 P4	I2 P3	I3 P2	I4 P1	MEAN
	1.79	1.74	1.62	1.44	1.72	1.82	1.69

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

TABLE	VARIETY
SED	0.276

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

STRATUM	DF	SE	CV%
BLOCK.WP	25	0.478	28.3
1ST CUT MEAN DM%	12.5		

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2ND CUT (31/10/78) DRY MATTER TONNES/HECTARE

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

VARIETY	I5 -	- P5	I1 P4	I2 P3	I3 P2	I4 P1	MEAN
ACARICID							
NONE	3.34	3.20	3.43	3.32	3.25	3.42	3.33
ENDOSULF	3.10	3.06	3.22	3.48	3.38	3.08	3.22
MEAN	3.22	3.13	3.32	3.40	3.31	3.25	3.27

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

TABLE	ACARICID	VARIETY	ACARICID VARIETY
SED	0.064	0.165	0.223
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
ACARICID			0.234

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

STRATUM	DF	SE	CV%
BLOCK.WP	20	0.286	8.7

TOTAL OF 2 CUTS DRY MATTER TONNES/HECTARE

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

VARIETY	I5 -	- P5	I1 P4	I2 P3	I3 P2	I4 P1	MEAN
	5.01	4.87	4.95	4.84	5.04	5.07	4.96

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

TABLE	VARIETY
SED	0.299

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

STRATUM	DF	SE	CV%
BLOCK.WP	25	0.519	10.4

TOTAL OF 2 CUTS MEAN DM% 17.3

PLOT AREA HARVESTED 0.00062