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Yields of the Field Experiments 1996



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96/R/LP/6 Spring Herbicides - Lupins

Rothamsted Research

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96/R/LP/6

LUPINS

SPRING HERBICIDES

Object: To test herbicides applied in the spring at various rates on the survival of weeds and autumn-sown lupins - Appletree.

Sponsor: I. Shield.

Design: 3 randomised blocks of (5 X 4) + 2 plots.

Plot dimensions: 3.0 x 9.0.

Treatments: All combinations of:-

| 1. HERBCIDE Herbicide, c | common name | (product | name): | |
|--------------------------|-------------|----------|--------|--|
|--------------------------|-------------|----------|--------|--|

| BR | Aziprotryne (Brasoran 50WP) |
|----|---|
| RP | Diflufenican (EXP 30930A, not commercially available) |
| FO | Cyanazine (Fortrol) |
| AS | Simazine (Atlas Simazine) |
| LO | Triasulfurin (Lo-gran 20 WG) |

2. HERBRATE Herbicide product rate, all applied in 220 1:

| | | Units | BR kg | RP 1 | FO 1 | AS 1 | LO |
|----|---------------|-------|----------|---------|---------|---------|-----|
| | W Half normal | | 2.0 | 0.5 | 1.0 | 1.2 | 19 |
| 1N | Normal | | 4.0 | 1.0 | 2.0 | 2.3 | 38 |
| 2N | Twice normal | | 8.0 | 2.0 | 4.0 | 4.6 | 75 |
| 4N | Four times | | 16.0 | 4.0 | 8.0 | 9.2 | 150 |

plus 2 extra plots

3. EXTRA Herbicide applied at normal rate:

| KN | Metazachlor and quinmerac (Katamaran) |
|----|---------------------------------------|
| TX | MCPB (Tropotox) |

For analysis tables only

| | HERBCIDE | HERBRATE |
|---------|----------|----------|
| LO 1/2N | LO | 1/2N |
| LO 1N | LO | 1N |
| LO 2N | LO | 2N |

LO 4N and TX failed and have been omitted from the analysis

Experimental diary:

26-Jul-95 : B : Straw removed.

04-Aug-95 : B : Ploughed and furrow pressed, rolled.

08-Sep-95 : B : Rotary harrowed, drilled CH304/70 at 40 seeds per m^2 .

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Experimental diary: 14-Sep-95 : B : Stomp 400 at 5.0 1 in 200 1. 18-Oct-95 : B : Laser at 0.75 l with Atlas Adjuvant Oil at 1.6 l in 200 1. 15-Mar-96 : T : HERBCIDE AS: Treatments applied. 29-Mar-96 : B : One-half of all the plots in one block were sprayed in error with Atlas Simazine at 2.3 1 in 200 1. 25-Apr-96 : T : EXTRA KN: Katamaran at 2.5 1 in 220 1. : T : EXTRA TX: Tropotox at 5.6 1 in 220 1. : T : HERBCIDE BR, RP, FO: Treatments applied. 26-Apr-96: T: HERBCIDE LO: Treatments applied. 10-Jul-96 : B : Mistral at 1.0 1 in 260 1. 18-Jul-96: B: Benlate Fungicide at 1.1 with Pirimicarb 50 DG at 280 g and Vassgro Spreader at 78 ml in 260 1. 03-Sep-96 : B : Reglone at 3.0 1 in 390 1. 11-Sep-96 : B : Combine harvested.

Previous crops: W. rape 1994, w. barley 1995.

NOTE: Plants were counted in May and June, samples were taken in May for dry matter analysis.

96/R/LP/6

GRAIN TONNES/HECTARE

***** Tables of means *****

| HERBRATE HERBCIDE | 1/2N | 1N | 2N | 4N | Mean |
|----------------------|------|---------|-------|-------|------|
| BR | 1.22 | 1.27 | 0.39 | 0.98 | 0.96 |
| RP | 1.00 | 0.62 | 1.32 | 0.88 | 0.95 |
| FO | 0.92 | 0.82 | 0.99 | 0.79 | 0.88 |
| AS | 1.11 | 1.36 | 0.69 | 1.08 | 1.06 |
| Mean | 1.06 | 1.02 | 0.85 | 0.93 | 0.97 |
| EXTRA | KN | LO 1/2N | LO 1N | LO 2N | |
| | 1.14 | 0.89 | 0.28 | 0 24 | |

Grand mean 0.90

*** Standard errors of differences of means ***

| HERBCIDE | HERBRATE | HE | RBCIDE |
|----------|----------|----|--------|
| | | HE | RBRATE |
| | | & | EXTRA |
| 0.210 | 0.210 | | 0.420 |

***** Stratum standard errors and coefficients of variation *****

Stratum d.f. s.e. cv%
BLOCK.WP 38 0.514 57.2

GRAIN MEAN DM% 73.7

PLOT AREA HARVESTED 0.00161