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85/R/P/6 Rates and Methods of Applying Pyrethroid Sprays - Potatoes

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85/R/P/6

POTATOES

RATES AND METHODS OF APPLYING PYRETHROID SPRAYS

Object: To study the effects of a pyrethroid insecticide applied electrostatically or conventionally - Long Hoos III 5.

Sponsors: D.C. Griffiths, J.A. Pickett, G.R. Cayley, G. Dawson, M. Woodcock.

Design: 4 randomised blocks of 9 plots.

Whole plot dimensions: 2.28 x 5.0.

Treatments:

| | |
|---------|---|
| INSTCDE | Insecticide, applied on 23 July, 1985: |
| 0 | None (duplicated) |
| FMC 2 E | 'FMC 5800' at 2 g a.i. applied electrostatically (duplicated) |
| FMC 4 E | 'FMC 5800' at 4 g a.i. applied electrostatically (duplicated) |
| FMC 8 E | 'FMC 5800' at 8 g a.i. applied electrostatically (duplicated) |
| FMC 8 C | 'FMC 5800' at 8 g a.i. applied conventionally in 200 l |

- NOTES: (1) A planned treatment with a pheromone spray was not applied because of machine failure.
(2) Electrostatic treatments were applied with an inductively charged, vertically mounted, electrostatic sprayer in 8.4 l.

Basal applications: Manures: (10:10:15+4.5 Mg) at 2500 kg. Weedkillers: Paraquat at 0.56 kg ion in 220 l. Linuron at 1.3 kg with paraquat at 0.28 kg ion in 220 l. Fungicide: Mancozeb at 1.3 kg in 220 l on seven occasions. Desiccant: Diquat at 0.60 kg ion in 220 l.

Seed: King Edward.

Cultivations, etc.: Ploughed: 13 Nov, 1984. Paraquat applied: 17 Apr, 1985. NPK Mg applied: 18 Apr. Deep-tine cultivated, spring-tine cultivated, rotary cultivated: 22 Apr. Planted by hand: 23 Apr. Linuron with paraquat applied: 16 May. Fungicide applied: 1 July, 10 July, 23 July, 6 Aug, 20 Aug, 29 Aug, and 5 Sept. Desiccant applied: 20 Sept. Haulm mechanically destroyed, potatoes lifted: 26 Sept. Previous crops: S. and w. beans 1983, s. wheat 1984.

NOTE: Aphid counts were made after the application of treatment sprays.

85/R/P/6

TOTAL TUBERS TONNES/HECTARE

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

| | | | | | | |
|----------|------|---------|---------|---------|---------|------|
| INSCDCDE | 0 | FMC 2 E | FMC 4 E | FMC 8 E | FMC 8 C | MEAN |
| | 57.6 | 60.3 | 57.9 | 57.5 | 60.8 | 58.6 |

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

| | | |
|-------|----------|---------|
| TABLE | INSCDCDE | |
| ----- | ----- | |
| SED | 3.52 | MAX-MIN |
| | 2.87 | MAX REP |

| | |
|---------|----------------------------|
| | INSCDCDE |
| MAX-MIN | FMC 8 C V ANY OF REMAINDER |
| MAX-REP | ANY OF REMAINDER |

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

| | | | |
|---------------------|----------|------|-----|
| STRATUM | DF | SE | CV% |
| BLOCK.WP | 28 | 5.74 | 9.8 |
| PLOT AREA HARVESTED | 0.000381 | | |