

POTATO EXPERIMENTS 1969

SITE: Meggs Land, Morley, Norfolk.

EXPERIMENT:

Blight control systems trial

TREATMENTS AND LAYOUT: Randomised block with 6 replicates

- A. Antrocol 2lb/ac
- B. Antracol 2lb/ac substituted by Du-ter 1½lb/ac late in season
- C. Du-ter 1½lb/ac
- D. Fennite A 1½lb/ac

PLOT SIZE:

Treatment: Four 30in. rows x 20yds
Harvest: One 30in. row x 18yds

MANURING OF EXPERIMENTAL CROP:

9½ cwt 13:13:20 giving 123½: 123½: 190

PREVIOUS CROPPING

1967 Spring wheat
1968 Spring wheat

CULTIVATIONS:

29 March whole field cultivated

PLANTING:

Date: 14 May
Seed: King Edward

SPRAYING: (1)

Date: 1 July

Weather conditions during spraying: 23°C, moderate humidity. Wind E force 1

Equipment and method adopted: Van der Weij Birchmeier nozzles 1.6-2F 2.5 kg/cm², 28 gal/ac

Chemicals:

- Antracol (Ex Bayer) 70% dispersable powder of propineb
- Du-ter (Ex Midox) 20% fentin hydroxide
- Fennite A(Ex Fisons) 6.5% fentin acetate + maneb

State of potatoes: 12 in. tall

Potato counts:

Date: 22 October
Method: Plant station on two 30in. rows x 18 yds.

Potato assessments:

Date: 27 August, 14 September
Method: Measurements of proportion of foliage damaged by blight lesions.

HARVEST

Date: 21 November
Method: 1 30in. row x 18 yds.

SPRAYING (2)

Date: 11 July

Weather conditions during spraying: 15°C, W wind force 2, moderate humidity and cloudy.

Equipment and method adopted: Van der Weij sprayer 2.5 kg/cm²
Birchmeier nozzles 1.6-2F, 28 gal/ac

Chemicals: See sheet 1

State of potatoes: 15-18in. tall; not quite meeting in rows

Potato Counts: Date: 22 October
Method: plant stations on two 30in. rows x 18 yds.

Potato assessments: Date: 27 August, 14 September
Method: Measurements of proportion of foliage damaged by blight lesions.

Harvest

Date: 21 November
Method: One 30in. row x 18yds.

SPRAYING (3)

Date: 31 July

Weather conditions during spraying: 17°C, NE wind force 2, moderate humidity and sunny spells.

Equipment and method adopted: Van der Weij sprayer 2.5 kg/cm²
Birchmeier nozzles 1.6-2F, 28 gal/ac

Chemicals: See sheet (1)

State of potatoes: potatoes meeting and crossing in the rows

Potato counts: Date: 22 October
Method: Plant Stations on two 30in. rows x 18yds.

Potato assessments: Date: 27 August, 14 September
Method: Measurements of proportion of foliage damaged by blight lesions.

HARVEST: Date: 21 November
Method: One 30in. row x 18yds

SPRAYING (4)

Date: 5 August

Weather conditions
during spraying: 20°C calm high humidity and cloudy.

Equipment and method:
adopted: Van der Weij sprayer 2.5 kg/cm²
Birchmeier nozzles 1.6-2F, 45 gal/ac

Chemicals:

See sheet (1)

State of potatoes: 2 ft. to waist high. No blight present.

Potato counts:

Date: 22 October

Method: Plant Stations on two 30in. rows x 18 yds.

Potato assessments:

Date: 27 August, 14 September

Method: Measurements of proportion of foliage damaged by blight lesions.

HARVEST:

Date: 21 November

Method: One 30in. row x 18 yds.

SPRAYING (5)

Date: 18 August

Weather conditions
during spraying: 19°C, SW wind force 2, cloudy with moderate humidity.

Equipment and method
adopted: Van der Weij sprayer 2.5 kg/cm²
Birchmeier nozzles 1.6-2F, 45 gal/ac

Chemicals:

See sheet (1)

State of potatoes: Fully grown. Blight (0.1%) at ends where unsprayed.

Potato counts: Date: 22 October

Method: Plant Stations on two 30in. rows x 18 yds.

Potato assessments: Date: 27 August, 14 September

Method: Measurements of proportion of foliage damaged by blight lesions.

HARVEST:

Date: 21 November

Method: One 30in. row x 18 yds.

BLIGHT CONTROL SYSTEMS TRIAL

MORLEY 1969

TREATMENT (prod./acre)	YIELD TUBERS >2in. as % TOTAL YIELD	YIELD TUBERS 2in.-1½in. as % TOTAL YIELD	YIELD TUBERS 1½-1¼in. as % TOTAL YIELD	YIELD TUBERS <1¼in. as % TOTAL YIELD	TOTAL WARE as % TOTAL YIELD	YIELD TUBERS 2in.-1¼in. as % TOTAL YIELD	YIELD TUBERS <1½in. as % TOTAL YIELD	YIELD TUBERS >1¼in. as % TOTAL YIELD	YIELD TUBERS <2in. as % TOTAL YIELD
<u>Antracol</u> 2 lb	49.3	36.2	10.4	4.1	85.5	46.6	14.5	95.9	50.7
<u>Antracol-Du-ter</u> 2 lb 1¼lb	47.2	39.4	10.0	3.4	86.6	49.4	13.4	96.6	52.8
<u>Du-ter</u> 1¼lb	52.3	35.4	8.8	3.4	87.8	44.3	12.2	96.6	47.7
<u>Fennite A</u> 1¼lb	51.8 (±1.70)	35.4 (±1.41)	8.8 (±0.49)	4.1 (±0.40)	87.2 (±0.54)	44.2 (±1.56)	12.8 (±0.54)	95.9 (±0.40)	48.2 (±1.70)
Standard error per plot	±4.17 or 8.3%	±3.47 or 9.5%	±1.20 or 12.6%	±0.99 or 26.1%	±1.31 or 1.5%	±3.82 or 8.3%	±1.31 9.9%	±0.99 or 1.0%	±4.17 or 8.4%

TREATMENT (pred/acre)	YIELD OF TUBERS > 2 in. ton/ac	YIELD OF TUBERS 2 in - 1 1/4 in ton/ac	YIELD OF TUBERS 1 3/8 in - 1 1/4 in ton/ac	YIELD OF TUBERS < 1 1/4 in ton/ac	TOTAL WARE ton/ac	YIELD OF TUBERS < 1 5/8 in ton/ac	TOTAL YIELD ton/ac	% Blight on 14 September
<u>Antracol</u> 2 lb	4.42	3.28	0.93	0.37	7.71	1.30	9.00	45.0
<u>Antracol</u> early, <u>Du-ter</u> late 2 lb 1 1/4 lb	4.45	3.73	0.95	0.32	8.18	1.27	9.45	54.0
<u>Du-ter</u> 1 1/4 lb	5.09	3.44	0.86	0.33	8.53	1.19	9.72	6.2
<u>Fennite A</u> 1 1/2 lb	4.81 (±0.264)	3.26 (±0.206)	0.82 (±0.067)	0.37 (±0.037)	8.07 (±0.364)	1.18 (±0.080)	9.26 (±0.422)	15.0 (±6.68)
Standard error per plot	±0.646 or 13.8%	±0.503 or 14.68%	±0.163 or 18.3%	±0.090 or 25.96%	±0.892 or 11.0%	±0.196 or 15.8%	±1.033 or 11.04%	±14.94 or 49.7%