

FIELD EXPERIMENTS 1969POTATO BLIGHT EXPERIMENTEXPERIMENT: Logarithmic screening of
potato blight fungicidesSITE: Megg's Land, Morley, Norfolk.SOIL TYPE: Sandy loamTREATMENT AND LAYOUT: 2 Systematic replicates

Peak dose (product/ao)

<u>Antracol</u>	6 lb
<u>Blitzblight</u>	4 lb
<u>Brestan 60</u>	2.5 lb
<u>Maneb /Brestan</u>	4 lb
<u>Daconil 2787</u>	7.5 lb
<u>Dithane 945</u>	4 lb
<u>Du-ter</u>	4 lb
<u>Erithane</u>	4 lb
<u>Fennite</u>	4 lb
<u>Fennite A</u>	4 lb
<u>Hoe 2872F</u>	2.5 lb
<u>Trimanzone</u>	6 lb
<u>Triphentin acetata</u>	2.5 lb
<u>Trizaman D</u>	6 lb
<u>Stanoram</u>	2.5 lb
<u>Zelmone</u>	6 lb

PLOT SIZE: Treatment Two 30 in. rows x 24 yds.
Harvest -----

MANURING OF EXPERIMENTAL CROP:

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

PREVIOUS CROPPING: 1967 Spring Wheat
1968 Sugar beet

CULTIVATIONS:

29 March whole field cultivated.

PLANTING:

Date: 14 May
Seed: King Edward

SPRAYING (1)

Date: 30 June
Weather conditions during spraying: 22°C, moderate-high humidity, slight N breeze force 1 occasionally calm.

Equipment and method adopted:

Van der Weij 2.5 kg/cm² Birchmeier nozzles 1.2-673a
83 gal/ac.

Chemicals:

Antracol (Ex Bayer) - 70% dispersible powder of propineb

Blitzblight (Ex Amoco) - cufraneb (Zinc, manganese, copper, iron dithiocarbamate complex) and ethylene bisdithiocarbamic acid.

Brestan 60 (Ex Hoechst) - 60% fentin acetate + 20% maneb.

Maneb/Brestan (Ex Hoechst) - 10% fentin^{acetate} + 62% maneb.

Daconil 2787 (Ex Farm Protection) 75% tetrachloroisophthalonitrile.

Dithane 945 (Ex Shellstar) 80% w.p. mancozeb. (20% Mn)
(2.5% Zn)

Du-ter (Ex Midox) }
Erithane (Ex Bayer) } 20% fentin hydroxide.

Fennite (Ex Fisons) 7% fentin hydroxide + maneb

Fennite A (Ex Fisons) 6.5% fentin acetate + maneb

Hoe 2872 (F) (Ex Hoechst) 60% fentin acetate

Trimanzone (Ex Bos) 85% dithiocarbamate containing ethylene and dimethyl bisdithiocarbamate ions, zinc, manganese and iron ions.

Triphentin acetate (Ex Bos) 20% fentin acetate

Trizaman D (Ex Murphy)

Stannoran (Ex Shellstar) 50% decafentin w.p.

Zelmone (Ex Bayer) 65% zineb

State of potatoes: 12 in. tall and across.

POTATO ASSESSMENT:

Date: 16 Sept.

Method: Measurements at specific levels of blight infection.

SPRAYING: (2)

Date: 12 July

Weather conditions
during spraying: 19°C, high humidity, slight NNW breeze.

Equipment and method
adopted: Van der Weij 2.5 kg/cm² Birchmeier nozzles
1.2 - 673a 83 gal/ac

Chemicals: See spraying sheet (1)

State of potatoes: 1.5 in. - 18 in. tall, not quite meeting in rows.

POTATO ASSESSMENT:

Date: 16 Sept.

Method: Measurements at specific levels of blight infection.

SPRAYING (3)

Date: 31 July

Weather conditions
during spraying: 17^oC, moderate humidity, calm.

Equipment and method
adopted: Van der Weij 2.5 kg/cm² Birchmeier nozzles 1.2-673a
83 gal/ac

Chemicals:

See spraying sheet (1)

State of potatoes: Meeting and crossing in rows.

SPRAYING (4)

Date: 6 August

Weather conditions
during spraying:

19°C, moderate humidity, cloudy with
sunny spells, almost calm.

Equipment and
method adopted:

Van der Weij 2.5 kg/cm²

Birchmeier nozzles 1.2-673a
83 gal/ac

Chemicals:

See spraying sheet (1)

State of potatoes:

2 ft tall to waist high.

POTATO ASSESSMENTS:

Date: 16 Sept.

Method: Assessments at specific levels of blight infection.

SPRAYING (5)

Date: 19 August

Weather conditions
during spraying: 17°C, moderate humidity, SW breeze force 3
cloudy, slight shower after No. 11 sprayed,
few spots when trial being finished.

Equipment and method adopted: Van der Weij 2.5 kg/cm² Birchmeier 1.6-673a
97 gal/ac

Chemicals:

See spraying sheet (1)

State of potatoes: Fully grown, 0-1% blight at ends not sprayed.

POTATO ASSESSMENT

Date: 16 Sept.

Method: Measurements at specific levels of blight infection.

SPRAYING (6)

Date: 2 September

Weather conditions during spraying: 15°C, moderate humidity, slight NE breeze force 3.

Equipment and method adopted:

Van der Weij 2.5 kg/cm² Birchmeier nozzles 1.6-673a
97 gal/ac.

Chemicals:

See spraying sheet (1)

State of potatoes: Fully grown.

POTATO ASSESSMENT

Date: 16 September

Method: Measurements of specific levels of blight infection.

LOGARITHMIC SCREENING OF POTATO BLIGHT FUNGICIDES

Doses at which specific levels of infections occurred.

TREATMENT (Peak dose prod/ac)	% Blight infection							
	0.0	0.1	1.0	5.0	10.0	25.0	50.0	75.0
<u>Antracol</u> * 6 lb	-	-	-	-	-	(3.2)	(1.9)	-
<u>Blitzblight</u> 4 lb	-	-	2.9	2.2	-	0.7	(0.4)	-
<u>Brestan 60</u> 2.5 lb	-	-	-	1.3	(0.1)	-	-	-
<u>Brestan/Maneb</u> 4 lb	-	-	3.7	0.8	-	-	-	-
<u>Daconil 2787</u> 7.5 lb	(6.1)	5.8	1.8	0.7	-	-	-	-
<u>Dithane 94.5</u> 4 lb	(3.7)	-	2.9	1.4	-	(0.6)	-	-
<u>Du-ter</u> 4 lb	-	-	2.8	1.3	(0.3)	-	-	-
<u>Erithane</u> * 4 lb	-	(2.2)	(2.5)	(0.5)	-	-	-	-
<u>Fennite</u> * 4 lb	-	(3.6)	(2.8)	(1.9)	-	(0.8)	-	-
<u>Fennite A*</u> 4 lb	-	-	(3.1)	(1.4)	-	(0.3)	-	-
<u>Hoe 2872 (F)</u> 2.5 lb	-	-	-	1.8	-	1.2	0.4	-
<u>Trimzone</u> 6 lb	-	-	4.6	2.3	-	0.6	-	-
<u>Triphentis acetate</u> 2.5 lb	-	-	2.1	1.8	-	1.4	0.4	-
<u>Trizama D</u> 6 lb	-	(4.4)	2.4	1.3	-	-	-	-
<u>Stannoran</u> 2.5 lb	-	-	2.1	1.4	-	(0.7)	-	-
<u>Zelmone</u> 6 lb	-	-	-	(3.5)	-	(2.6)	(1.0)	(0.3)

Figures in brackets indicate that the level of infection was observed on one replicate only.

* Fire damage on one replicate of Antracol, Erithane, Fennite, and Fennite A.