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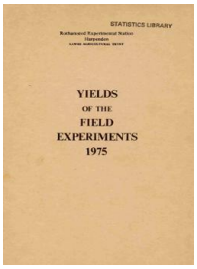
ROTHAMSTED RESEARCH

Yields of the Field Experiments 1975

Full Table of Content



Beans

Rothamsted Research

Rothamsted Research (1976) *Beans ;* Yields Of The Field Experiments 1975, pp 339 - 374 **- DOI: https://doi.org/10.23637/ERADOC-1-141**

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75/R/BE/1

WINTER BEANS

SEED RATES, ROW SPACINGS AND FUNGICIDES

Object: To study the effects of plant density and fungicides on Chocolate Spot (Botrytis spp.) and yield of winter beans - Gt. Knott I.

Sponsor: A. Bainbridge.

Design: 2 randomised blocks of 24 plots.

Whole plot dimensions: 4.27 x 9.14.

Treatments: All combinations of:-

1. Fungicides:

	FUNGCIDE
None (4 plots per block)	0
Benomyl (0.56 kg in 340 l)	BENOMYL
RP 26019 (Glycophene at 0.56 kg in 340 l)	RP 26019

2. Seed rates (kg):

	SEEDRATE
126	126
378	378

3. Spacing between rows:

	SPACING
18 cm (7 inches)	18 CM
53 cm (21 inches)	53 CM

NOTE: It was intended to compare applications of fungicides on one and two occasions. Because of exceptionally dry weather and failure of Chocolate Spot to develop, only one application was made.

Basal applications: Manures: FYM at 50 tonnes.

Seed: Throws MS.

Cultivations, etc.:- FYM applied: 4 Sept, 1974. Ploughed: 16 Sept. Spring-tine cultivated: 26 Nov. Seed sown: 27 Nov. Fungicides applied: 9 May. Combine harvested: 12 Aug. Previous crops: Winter wheat 1973, barley 1974.

NOTES: (1) Emergence counts were made in spring.
(2) Chocolate Spot assessments were made throughout the season.

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75/R/BE/1

GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

SEEDRATE FUNGCIDE	126	378	MEAN
0	3.80	4.25	4.03
BENOMYL	3.73	4.27	4.00
RP 26019	3.47	4.37	3.92
MEAN	3.74	4.28	4.01

SPACING FUNGCIDE	18 CM	53 CM	MEAN
0	4.12	3.93	4.03
BENOMYL	4.21	3.80	4.00
RP 26019	4.30	3.54	3.92
MEAN	4.17	3.84	4.01

SPACING SEEDRATE	18 CM	53 CM	MEAN
126	3.97	3.51	3.74
378	4.37	4.18	4.28
MEAN	4.17	3.84	4.01

SEEDRATE	126		378	
SPACING FUNGCIDE	18 CM	53 CM	18 CM	53 CM
0	3.98	3.63	4.27	4.23
BENOMYL	4.04	3.42	4.38	4.17
RP 26019	3.84	3.09	4.76	3.99

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

TABLE	FUNGCIDE	SEEDRATE	SPACING	FUNGCIDE SEEDRATE
SED	0.116(1) 0.147(2)	0.085	0.085	0.104(3) 0.164(1) 0.207(2)

TABLE	FUNGCIDE SPACING	SEEDRATE SPACING	FUNGCIDE SEEDRATE SPACING
SED	0.104(3) 0.164(1) 0.207(2)	0.120	0.147(3) 0.232(1) 0.293(2)

(1) 0 V BENOMYL OR RP 26019
(2) BENOMYL V RP 26019
(3) 0

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75/R/BE/1

GRAIN TONNES/HECTARE

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

STRATUM	DF	SE	CV%
BLOCK.WP	35	0.293	7.3

GRAIN MEAN DM% 88.6

MEAN PLOT AREA HARVESTED 0.00270

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75/R/BE/2

WINTER BEANS

FUNGICIDES AND BOTRYTIS

Object: To study the effect of a range of fungicides on control of Botrytis and yield of winter beans - Long Hoos IV 5.

Sponsor: A. Bainbridge.

Design: 3 blocks of 7 plots.

Whole plot dimensions: 2.67 x 3.05.

Treatments: Fungicides (applied twice at dates determined by Botrytis attack):-

	FUNGCIDE
None	NONE
Benomyl at 0.56 kg	BENOMYL
'RP 26019' at 0.56 kg a.i.	RP 26019
Thiophanate methyl at 1.12 kg	THIOPHAN
'BASF 35200' at 0.56 kg a.i.	BASF
Carbendazim at 0.56 kg	CARBENDA
Captafol at 1.3 kg	CAPTAFOL

NOTE: Fungicides were applied in 340 l on 9 May, 10 June.

Basal applications: Manures: (0:14:28) at 820 kg.

Seed: Throws M.S., sown at 380 kg.

Cultivations, etc.:- Ploughed: 25 Sept, 1974. PK applied: 1 Oct. Spring-tine cultivated: 14 Oct. Power harrowed: 27 Nov. Seed sown: 28 Nov. Combine harvested: 12 Aug, 1975. Previous crops: Potatoes 1973, mixed cereals 1974.

NOTE: Assessments were made at fortnightly intervals of Chocolate Spot (Botrytis fabae).

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75/R/BE/2

*** TABLES OF MEANS ***

GRAIN TONNES/HECTARE

FUNGCIDE	NONE	BENOMYL	RP 26019	THIOPHAN	BASF	CARBENDA	CAPTAFOL	MEAN
	4.09	4.21	4.04	3.93	3.64	3.88	3.52	3.90

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

TABLE	FUNGCIDE
SED	0.376

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

STRATUM	DF	SE	CV%
BLOCK.WP	12	0.460	11.8

GRAIN MEAN DM% 88.6

PLOT AREA HARVESTED 0.00049

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75/R/BE/4

SPRING BEANS

APHIDS AND ENTOMOPHTHORA

Object: To study the effects of the fungus Entomophthora on aphid populations and yield of field beans - Gt Field I.

Sponsor: N. Wilding.

Design: 5 randomised blocks of 5 plots.

Whole plot dimensions: 10.4 x 10.4.

Treatments: Control of insects and fungi:-

	TREATMNT
None	NONE
Insecticide: Demeton-s-methyl at 0.25 kg in 340 l on 17 July	INSCTCDE
Fungicide: Maneb at 0.8 kg in 340 l on 10 and 25 July	FUNGCIDE
Entomophthora spp, applied in live infected aphids on 9, 10, 11 July	ENTAPHID
Entomophthora virulenta, applied as resting-spore powder on 10 and 25 July	ENTSPORE

Basal applications: Manures: (0:14:28) at 400 kg. Weedkiller: Simazine at 1.1 kg in 220 l.

Seed: Minden, sown at 220 kg.

Cultivations, etc.:- Wheat stubble ploughed: 23 Jan, 1975. Potato ground chisel ploughed twice: 6 Feb. Spring-tine cultivated: 28 Feb. PK applied: 9 Apr. Seed sown: 22 Apr. Simazine applied: 24 Apr. Combine harvested: 29 Aug. Previous crops: Barley 1973, potatoes and winter wheat 1974.

NOTES: (1) As only small numbers of A. fabae appeared naturally the crop was inoculated with live adults on 25/26 July.
(2) During July weekly samples of aphids were collected for determination of the proportion infected by Entomophthora.
(3) The aphid population was assessed weekly during July.

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75/R/BE/4

*** TABLES OF MEANS ***

GRAIN TONNES/HECTARE

TREATMNT	
NONE	0.74
INSCTCDE	1.35
FUNGCIDE	0.62
ENTAPHID	0.58
ENTSPORE	0.61
MEAN	0.78

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

TABLE	TREATMNT
SED	0.141

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.223	28.6

GRAIN MEAN DM% 89.1

PLOT AREA HARVESTED 0.00221

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75/R/BE/5

SPRING BEANS

CONTROL OF WEEVILS

Object: To study the effects of several insecticides on control of weevils (and their parasites), weevil-transmitted viruses, and yield of field beans - Delafield.

Sponsors: A.J. Cockbain, J.H. Stevenson, P. Etheridge.

Design: 4 blocks of 6 plots.

Whole plot dimensions: 8.53 x 18.3. (Plots separated by fallows - 6.4 m).

Treatments: All combinations of insecticides:-

1. Sprays to foliage:	SPRAY
None	NONE
Fenitrothion at 0.75 kg	FENITRO
Malathion at 0.75 kg	MALATHIO
2. Granules to foliage:	GRANULE
None	NONE
Phorate at 1.1 kg	PHORATE

NOTE: Sprays, in 500 l, were applied on 22 May and 18 June. Granules were applied on 22 May and 20 June.

Basal applications: Manures: (0:14:28) at 410 kg placement drilled. Weedkiller: Simazine at 1.1 kg in 220 l. Insecticide: Menazon at 0.28 kg in 450 l.

Seed: Maris Bead, sown at 220 kg.

Cultivations, etc.:- Ploughed: 17 Jan, 1975. Spring-tine cultivated twice: 20 Apr. Seed sown and spring-tine cultivated: 22 Apr. Weedkiller applied: 24 Apr. Fallow areas rotary cultivated: 27 May, 25 June and 30 July. Menazon applied: 9 July. Combine harvested: 28 Aug. Previous crops: Winter wheat 1973, barley 1974.

NOTE: Amounts of damage by weevils were recorded on 21 May, and 30 May, and numbers of adults were estimated on 16 and 23 June. Incidence of viruses was assessed on 21 May, 24 June, 10 and 25 July and samples of seed were taken on 26 Aug to assess virus infection.

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75/R/BE/5

*** TABLES OF MEANS ***

GRAIN TONNES/HECTARE

SPRAY / GRANULE	NONE	FENITRO	MALATHIO	MEAN
NONE	1.41	1.91	1.74	1.68
PHORATE	1.44	1.93	1.92	1.76
MEAN	1.42	1.92	1.83	1.72

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

TABLE	GRANULE	SPRAY	GRANULE SPRAY
SED	0.068	0.084	0.118

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.167	9.7

GRAIN MEAN DM% 86.2

PLOT AREA HARVESTED 0.00585

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75/R/BE/7

SPRING BEANS

EFFECTS OF IN-ROW ALDICARB

Object: To study the effects of a range of rates of aldicarb applied in the rows on stem eelworm (Ditylenchus dipsaci) and weevil - transmitted viruses and the yield of field beans - Fosters O & E VI.

Sponsors: D.J. Hooper, A.J. Cockbain.

Design: 4 blocks of 4 plots.

Whole plot dimensions: 2.54 x 9.14.

Treatments: Rates of aldicarb (kg):-

	ALDICARB
None	0
1	1
2	2
4	4

NOTE: Aldicarb applied in bands over the open drills at sowing, harrowed in.

Basal applications: Manures: (0:14:28) at 750 kg. Weedkiller: Simazine at 1.1 kg in 340 l.

Seed: Maris Bead, sown at 220 kg.

Cultivations, etc.:- Ploughed: 17 Jan, 1975. PK applied, power harrowed: 23 Apr. Seed sown: 25 Apr. Weedkiller applied: 8 May. Combine harvested: 30 Aug. Previous crops: Beans 1973 and 1974.

NOTES: (1) Stems showing symptoms of attack by stem eelworm were counted on 5 Aug and samples of seed were taken at maturity to assess seed infestation.
(2) After harvest soil samples were taken to assess infestation by stem eelworm.

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75/R/BE/7

*** TABLES OF MEANS ***

GRAIN TONNES/HECTARE

ALDICARB	0	1	2	4	MEAN
	1.08	1.69	1.87	2.03	1.67

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

TABLE	ALDICARB
SED	0.106

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

STRATUM	DF	SE	CV%
BLOCK.WP	9	0.150	9.0

GRAIN MEAN DM% 87.0

PLOT AREA HARVESTED 0.00139

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75/R/P/1 and 75/W/P/1

POTATOES

VARIETIES

Object: To study the yield, susceptibility to fungal diseases and tolerance to potato cyst nematode (PCN) of several varieties of potatoes - Rothamsted (RH) Long Hoos I/II (PCN free) and Woburn (WH) Far Field I (PCN free) and Woburn (WI) Long Mead (PCN infected).

Sponsors: R. Moffitt, G.A. Hide, K. Evans.

Design: 3 randomised blocks of 7 plots, Long Hoos I/II (RH)
3 randomised blocks of 11 plots, Far Field I (WH) and Long Mead (WI)

Whole plot dimensions: (R) - 2.84 x 12.2, (W) - 4.27 x 12.2.

Treatments: Varieties:

Long Hoos I/II (RH)	Far Field (I/WH) & Long Mead (WI)	VARIETY
	Arran Banner	BANNER
Desiree	Desiree	DESIREE
King Edward		EDWARD
	Majestic	MAJESTIC
Maris Piper	Maris Piper	PIPER
	Maris Peer	PEER
Pentland Crown	Pentland Crown	CROWN
	Pentland Dell	DELL
Pentland Ivory	Pentland Ivory	IVORY
	Record	RECORD
Stormont Enterprise	Stormont Enterprise	ENTPRISE
Ulster Lancer	Ulster Lancer	LANCER

Basal applications:
Long Hoos I/II (RH): Manures: (13:13:20) at 1510 kg. Weedkiller: Linuron at 1.1 kg plus paraquat at 0.42 kg ion in 450 l. Insecticide: Demeton-s-methyl at 0.25 kg in 450 l. Fungicide: Mancozeb at 1.3 kg in 450 l.
Far Field I (WH): Manures: (13:13:20) at 1880 kg.
Long Mead (WI): Manures: (13:13:20) at 1860 kg.
Far Field I (WH) and Long Mead (WI): Weedkillers: Linuron at 1.2 kg plus paraquat at 0.28 kg ion in 280 l. Insecticide: Demeton-s-methyl at 0.25 kg in 280 l. Fungicide: Mancozeb at 1.3 kg in 390 l.

Cultivations, etc.:-
Long Hoos I/II (RH): Ploughed: 7 Jan, 1975. Spring-tine cultivated twice: 26 Apr, 5 May. NPK applied: 1 May. Spike rotary cultivated, potatoes planted: 7 May. Grubbed: 14 May. Rotary ridged: 22 May. Weedkiller applied: 30 May. Grubbed: 26 June. Insecticide applied: 27 June. Rotary ridged: 30 June. Fungicide applied: 28 July. Haulm mechanically destroyed: 26 Sept. Sprayed with undiluted BOV at 170 l: 29 Sept. Lifted: 13 Oct. Previous crops: Barley 1973, beans 1974.

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75/R/P/1 and 75/W/P/1

Far Field I (WH): Ploughed: 9-10 Jan, 1975. NPK applied: 18 Apr. Deep-tine cultivated: 21 Apr. Spring-tine cultivated: 3 May. Rotary harrowed, potatoes planted: 7 May. Weedkiller applied: 30 May. Grubbed: 23 June. Rotary ridged: 24 June. Insecticide applied: 26 June. Fungicide applied: 16 July. Arran Banner lifted by hand: 17 Sept. Remaining haulm mechanically destroyed: 29 Sept. Sprayed with undiluted BOV at 160 l: 2 Oct. Remaining varieties lifted: 8 Oct. Previous crops: Fallow 1973, beans 1974.

Long Mead (WI): Subsoiled, tines 140 cm apart and 60 cm deep: 19 Sept, 1974. Ploughed: 16 Jan, 1975. Spring-tine cultivated, NPK applied: 29 Apr. Rotary harrowed twice: 6 May, 7 May. Potatoes planted: 7 May. Weedkiller applied: 30 May. Grubbed: 23 June. Rotary ridged: 25 June. Insecticide applied: 26 June. Fungicide applied: 16 July. Hand weeded twice: 17 July, 29 July. Lifted: 16 Oct. Previous crops: Potatoes 1973, fallow 1974.

NOTES: (1) The stock of Arran Banner was found, during growth, to be mixed with Maris Piper, yields were not taken.
(2) Tubers were graded into six sizes. Incidence of Rhizoctonia solani and common scab on the produce was assessed.

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75/R/P/1

LONG HOOS I/II (RH)

*** TABLE OF MEANS ***

VARIETY	TOTAL TUBERS TONNES/HECTARE	PERCENTAGE WARE 4.44CM (1.75 INCH) RIDDLE
DESIREE	12.1	80.7
EDWARD	14.9	53.8
PIPER	17.3	70.4
CROWN	19.1	89.8
IVORY	15.5	86.8
ENTPRISE	15.2	74.6
LANCER	14.1	70.1
MEAN	15.5	75.2

TOTAL TUBERS TONNES/HECTARE

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

TABLE	VARIETY
SED	1.19

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

STRATUM	DF	SE	CV%
BLOCK.WP	12	1.45	9.4

PLOT AREA HARVESTED 0.00235

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75/W/P/1

FAR FIELD I (WH)

*** TABLE OF MEANS ***

VARIETY	TOTAL TUBERS TONNES/HECTARE	PERCENTAGE WARE 4.44CM (1.75 INCH) RIDDLE
DESIREE	27.3	80.9
MAJESTIC	27.6	65.9
PIPER	28.4	51.2
PEER	19.9	43.7
CROWN	35.6	88.5
DELL	33.5	53.6
IVORY	32.2	89.5
RECORD	31.0	67.3
ENTPRISE	28.8	65.5
LANCER	28.8	65.1
MEAN	29.3	67.1

TOTAL TUBERS TONNES/HECTARE

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

TABLE	VARIETY
SED	1.82

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

STRATUM	DF	SE	CV%
BLOCK.WP	18	2.23	7.6

PLOT AREA HARVESTED 0.00130

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75/W/P/1

LONG MEAD (WI)

*** TABLE OF MEANS ***

VARIETY	TOTAL TUBERS TONNES/HECTARE	PERCENTAGE WARE 4.44CM (1.75 INCH) RIDDLE
DESIREE	3.9	47.4
MAJESTIC	4.4	10.5
PIPER	17.1	51.7
PEER	0.9	7.4
CROWN	11.9	69.9
DELL	6.0	7.2
IVORY	7.8	41.8
RECORD	7.6	23.0
ENTPRISE	6.1	13.4
LANCER	3.7	8.4
MEAN	6.9	28.1

TOTAL TUBERS TONNES/HECTARE

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

TABLE	VARIETY
SED	1.85

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

STRATUM	DF	SE	CV%
BLOCK.WP	18	2.27	32.7

PLOT AREA HARVESTED 0.00130

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75/R/P/2 and 75/W/P/2

POTATOES

SEED STOCKS AND SEED TREATMENT

Object: To study the effects of treating tubers with systemic fungicides or a fumigant on tuber-borne diseases and yield of potatoes - Rothamsted (R) Long Hoos I/II and Woburn (W) Far Field I.

Sponsors: G.A. Hide, M.J. Adams, F. Bell.

Design: 4 randomised blocks of 6 plots split into 4 (plus one extra block for sampling).

Whole plot dimensions: 5.69 x 9.53.

Treatments: All combinations of:-

Whole plots: 1. Varieties: — VARIETY

King Edward, Long Hoos I/II (R) only	EDWARD
Maris Piper, Far Field I (W) only	PIPER
Pentland Crown	CROWN
Pentland Ivory	IVORY

2. Seed health: — HEALTH

ex FS, once-grown at Rothamsted in 1974	FS
ex VTSC, once-grown at Rothamsted in 1974	VTSC

Sub plots: 3. Fungicide to seed tubers: — FUNGCIDE

None	NONE
Benomyl	BENOMYL
See-butylamine	SEEBUTYL
Thiabendazole	THIABEND

Basal applications:-

Long Hoos I/II (R): Manures: (13:13:20) at 1510 kg. Weedkiller: Linuron at 1.1 kg plus paraquat at 0.42 kg ion in 450 l. Insecticide: Demeton-s-methyl at 0.25 kg in 450 l. Fungicide with insecticide: Mancozeb at 1.3 kg plus demeton-s-methyl at 0.25 kg in 450 l.

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Far Field I (W): Manures: (13:13:20) at 1880 kg. Weedkiller: Linuron at 1.2 kg plus paraquat at 0.28 kg ion in 280 l. Insecticide: Demeton-s-methyl at 0.25 kg in 280 l. Fungicide: Mancozeb at 1.3 kg in 390 l.

Cultivations, etc.:-

Long Hocs I/II (R): Ploughed: 7 Jan, 1975. Spring-tine cultivated: 26 Apr. NPK applied: 1 May. Spring-tine cultivated, spike rotary cultivated, potatoes planted: 5 May. Grubbed: 14 May. Rotary ridged: 22 May. Weedkiller applied: 30 May. Insecticide applied: 27 June. Fungicide with insecticide applied: 28 July. Haulm mechanically destroyed: 26 Sept. Sprayed with undiluted BOV at 170 l: 29 Sept. Lifted: 14 Oct. Previous crops: Barley 1973, beans 1974.

Far Field I (W): Ploughed: 9-10 Jan, 1975. NPK applied: 18 Apr. Deep-tine cultivated: 21 Apr. Spring-tine cultivated: 3 May. Rotary harrowed, potatoes planted: 8 May. Weedkiller applied: 30 May. Insecticide applied: 26 June. Fungicide applied: 16 July. Haulm mechanically destroyed: 29 Sept. Sprayed with undiluted BOV at 160 l: 2 Oct. Lifted: 9 Oct. Previous crops: Fallow 1973, beans 1974.

NOTES: (1) Counts of plant and stem numbers were made before burning off.
(2) Crop samples were taken in July and October for tuber weight, size and estimates of fungal infections.
(3) At harvest tubers were graded into 6 sizes and assessments made of Oospora, Rhizoctonia, Helminthosporium and Phoma infection.

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75/R/P/2 LONG HOOS I/II (R)

TOTAL TUBERS TONNES/HECTARE

*** TABLE OF MEANS ***

HEALTH VARIETY	FS	VTSC	MEAN
EDWARD	19.9	17.6	18.7
CROWN	22.6	20.7	21.6
IVORY	17.1	20.8	19.0
MEAN	19.8	19.7	19.8

FUNGCIDE VARIETY	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
EDWARD	18.3	18.9	20.1	17.7	18.7
CROWN	21.4	21.8	22.3	21.0	21.6
IVORY	18.4	20.2	18.3	18.9	19.0
MEAN	19.4	20.3	20.3	19.2	19.8

FUNGCIDE HEALTH	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
FS	19.9	20.2	20.0	19.3	19.8
VTSC	18.9	20.4	20.5	19.1	19.7
MEAN	19.4	20.3	20.3	19.2	19.8

VARIETY	FUNGCIDE HEALTH	NONE	BENOMYL	SECBUTYL	THIABEND
EDWARD	FS	20.1	20.4	20.6	18.6
	VTSC	16.6	17.3	19.6	16.8
CROWN	FS	22.6	23.0	22.2	22.3
	VTSC	20.2	20.6	22.4	19.6
IVORY	FS	16.9	17.1	17.3	17.0
	VTSC	19.9	23.3	19.4	20.8

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

TABLE	VARIETY	HEALTH	FUNGCIDE	VARIETY HEALTH
SED	2.58	2.10	0.57	3.65

TABLE	VARIETY FUNGCIDE	HEALTH FUNGCIDE	VARIETY HEALTH FUNGCIDE
SED	2.72	2.22	3.84
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY	0.99		
HEALTH		0.81	
VARIETY.HEALTH			1.41

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75/R/P/2 LONG HOOS I/II (R)

TOTAL TUBERS TONNES/HECTARE

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	5.16	26.1
BLOCK.WP.SP	54	1.99	10.1

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

*** TABLE OF MEANS ***

HEALTH VARIETY	FS	VTSC	MEAN
EDWARD	35.9	22.1	29.0
CROWN	74.9	69.9	72.4
IVORY	80.9	77.2	79.0
MEAN	63.9	56.4	60.1

FUNGCIDE VARIETY	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
EDWARD	30.1	27.2	29.0	29.7	29.0
CROWN	71.0	71.8	77.9	68.8	72.4
IVORY	78.0	79.0	79.0	80.2	79.0
MEAN	59.7	59.3	62.0	59.6	60.1

FUNGCIDE HEALTH	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
FS	64.5	64.2	63.6	63.3	63.9
VTSC	54.9	54.5	60.3	55.8	56.4
MEAN	59.7	59.3	62.0	59.6	60.1

VARIETY	FUNGCIDE HEALTH	NONE	BENOMYL	SECBUTYL	THIABEND
EDWARD	FS	37.1	36.0	33.3	37.3
	VTSC	23.1	18.4	24.7	22.1
CROWN	FS	75.4	75.3	77.6	71.3
	VTSC	66.7	68.3	78.1	66.3
IVORY	FS	81.2	81.2	80.0	81.3
	VTSC	74.8	76.8	78.1	79.1

PLOT AREA HARVESTED 0.00135

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75/W/P/2 FAR FIELD I (W)

TOTAL TUBERS TONNES/HECTARE

*** TABLE OF MEANS ***

HEALTH	FS	VTSC	MEAN
VARIETY			
PIPER	19.4	18.3	18.9
CROWN	32.9	33.5	33.2
IVORY	22.4	23.2	22.8
MEAN	24.9	25.0	25.0

FUNGCIDE	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
VARIETY					
PIPER	17.5	19.1	18.4	20.6	18.9
CROWN	34.2	31.5	32.7	34.3	33.2
IVORY	20.1	22.2	25.5	23.4	22.8
MEAN	23.9	24.2	25.5	26.1	25.0

FUNGCIDE	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
HEALTH					
FS	22.7	25.7	25.7	25.5	24.9
VTSC	25.1	22.8	25.3	26.7	25.0
MEAN	23.9	24.2	25.5	26.1	25.0

	FUNGCIDE	NONE	BENOMYL	SECBUTYL	THIABEND
VARIETY	HEALTH				
PIPER	FS	17.1	19.9	19.5	21.3
	VTSC	17.8	18.3	17.3	20.0
CROWN	FS	31.5	32.8	33.0	34.2
	VTSC	36.9	30.3	32.4	34.3
IVORY	FS	19.6	24.5	24.6	20.9
	VTSC	20.7	19.8	26.3	25.8

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

TABLE	VARIETY	HEALTH	FUNGCIDE	VARIETY HEALTH
SED	1.25	1.02	0.99	1.76

TABLE	VARIETY FUNGCIDE	HEALTH FUNGCIDE	VARIETY HEALTH FUNGCIDE
SED	1.94	1.58	2.74
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY	1.71		
HEALTH		1.40	
VARIETY .HEALTH			2.42

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75/H/P/2 FAR FIELD I (W)

TOTAL TUBERS TONNES/HECTARE

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	2.49	10.0
BLOCK.WP.SP	54	3.43	13.7

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

*** TABLES OF MEANS ***

HEALTH VARIETY	FS	VTSC	MEAN
PIPER	28.1	22.8	25.5
CROWN	78.2	74.0	76.1
IVORY	74.9	70.1	72.5
MEAN	60.4	55.6	58.0

FUNGCIDE VARIETY	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
PIPER	24.1	26.8	23.6	27.3	25.5
CROWN	74.5	74.9	78.5	76.6	76.1
IVORY	69.2	70.2	75.5	75.1	72.5
MEAN	55.9	57.3	59.2	59.7	58.0

FUNGCIDE HEALTH	NONE	BENOMYL	SECBUTYL	THIABEND	MEAN
FS	59.0	60.4	61.3	60.9	60.4
VTSC	52.9	54.2	57.1	58.4	55.6
MEAN	55.9	57.3	59.2	59.7	58.0

VARIETY	FUNGCIDE HEALTH	NONE	BENOMYL	SECBUTYL	THIABEND
PIPER	FS	24.3	29.6	28.2	30.3
	VTSC	24.0	24.0	18.9	24.3
CROWN	FS	79.1	77.1	77.6	78.8
	VTSC	69.9	72.7	79.3	74.4
IVORY	FS	73.5	74.4	78.1	73.6
	VTSC	64.9	65.9	73.0	76.5

PLOT AREA HARVESTED 0.00135

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75/R/P/3

POTATOES

SEED SOURCES

Object: To study yields and tuber-borne diseases of potato stocks freed from these diseases by the use of stem cuttings and to compare these with local once-grown and bought-in certified stocks. The effects of irrigation are also studied - Long Hoos I/II.

Sponsors: G.A. Hide, D.H. Lapwood, M.J. Adams.

Design: 2 randomised blocks of 2 plots, split into 24 (plus one extra plot for sampling).

Whole plot dimensions: 1.42 x 9.53.

Treatments: All combinations of:-

Whole plots: 1. Irrigation:		IRRIGTN
	None	NONE
	Watered (total 216 mm)	WATERED
Sub plots: 2. Sources of King Edward seed tubers:		SEEDSRCE
	Healthy (ex Scotland VTSC), (2 plots/block)	HEALTHY
	Healthier (once-grown at Rothamsted from ex Scotland VTSC), (2 plots/block)	HEALTHY+
	Four different commercial stocks (ex VTSC)	COMM/1-COMM/4
	Eight different certified stocks (not ex VTSC)	CERT/1-CERT/8
	Eight different once-grown stocks ex Lincolnshire (not ex VTSC)	OG/1-OG/8

Basal applications: Manures: (13:13:20) at 1510 kg. Weedkillers: Linuron at 1.1 kg plus paraquat at 0.42 kg ion in 450 l. Fungicide: Mancozeb at 1.3 kg with demeton-s-methyl on the second occasion. Insecticide: Demeton-s-methyl at 0.25 kg in 450 l on two occasions.

Cultivations, etc.:- Ploughed: 7 Jan, 1975. Spring-tine cultivated: 26 Apr. NPK applied: 1 May. Spring-tine cultivated, spiked rotary cultivated, potatoes machine planted: 5 May. Grubbed: 14 May. Rotary ridged: 22 May. Weedkiller applied: 30 May. Grubbed: 26 June. Insecticide applied: 27 June. Rotary ridged: 30 June. Insecticide and fungicide applied: 28 July. Irrigation applied: 76 mm on 18 July, 51 mm on 26 July and 19 Aug, 38 mm on 29 Aug. Haulm mechanically destroyed: 26 Sept. Sprayed with undiluted BOV at 170 l: 29 Sept. Lifted: 13 Oct. Previous crops: Barley 1973, beans 1974.

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NOTES: (1) Counts of plant and stem numbers were made before burning off.
(2) Crop samples were taken on 10, 30 July, 18 August for assessment of rotting of mother tubers and infection of plants and of progeny tubers.
(3) At harvest tubers were graded into 6 sizes and assessments made of Oospora, Rhizoctonia, Helminthosporium and Phoma infections.
(4) One row of sub plots did not receive full irrigation and the yields have been adjusted by using covariates.

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75/R/P/3

TOTAL TUBERS TONNES/HECTARE

*** TABLES OF MEANS ***

IRRIGTN / SEEDSRCE	NONE	WATERED	MEAN
HEALTHY	21.4	36.1	28.7
HEALTHY+	19.6	35.8	27.7
COMM/1	17.9	41.6	29.8
COMM/2	18.0	42.9	30.5
COMM/3	21.8	43.3	32.6
COMM/4	18.0	40.7	29.3
CERT/1	24.2	34.0	29.1
CERT/2	15.6	35.8	25.7
CERT/3	16.1	32.1	24.1
CERT/4	15.0	31.6	23.3
CERT/5	19.3	37.2	28.3
CERT/6	17.8	29.1	23.4
CERT/7	20.6	37.2	28.9
CERT/8	18.0	37.0	27.5
OG/1	21.2	37.4	29.3
OG/2	16.5	32.4	24.4
OG/3	16.0	29.4	22.7
OG/4	14.5	36.2	25.4
OG/5	17.6	34.7	26.1
OG/6	14.2	34.9	24.6
OG/7	12.6	31.4	22.0
OG/8	13.2	30.1	21.7
MEAN	17.9	35.5	26.7

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

TABLE	SEEDSRCE	SEEDSRCE* IRRIGTN
SED	3.36(1)	4.80(1)
	2.91(2)	4.16(2)
	2.37(3)	3.39(3)

(1) ANY OF REMAINDER
(2) THE REMAINDER V HEALTHY OR HEALTHY+
(3) HEALTHY V HEALTHY+
* EXCEPT WHEN COMPARING MEANS WITH THE SAME LEVEL OF IRRIGTN

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

STRATUM	DF	SE	CV%
BLOCK.WP.SP	49	4.70	17.6

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75/R/P/3

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

*** TABLES OF MEANS ***

IRRIGTN	NONE	WATERED	MEAN
SEEDSRCE			
HEALTHY	26.6	53.4	40.0
HEALTHY+	33.5	52.9	43.2
COMM/1	37.7	56.2	46.9
COMM/2	30.2	59.0	44.6
COMM/3	35.2	56.8	46.0
COMM/4	23.0	51.6	37.3
CERT/1	39.4	59.5	49.5
CERT/2	27.5	47.8	37.6
CERT/3	33.4	46.9	40.2
CERT/4	28.4	40.2	34.3
CERT/5	36.1	50.3	43.2
CERT/6	38.3	52.8	45.5
CERT/7	47.7	60.2	53.9
CERT/8	41.6	62.7	52.1
OG/1	35.7	60.2	48.0
OG/2	27.2	53.6	40.4
OG/3	29.8	46.5	38.2
OG/4	28.1	50.9	39.5
OG/5	41.0	56.2	48.6
OG/6	31.7	56.8	44.2
OG/7	29.9	50.4	40.2
OG/8	31.7	46.7	39.2
MEAN	33.1	53.3	43.2

PLOT AREA HARVESTED 0.00135

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75/R/P/4

POTATOES

BLIGHT AND APHID REFERENCE PLOTS

Object: To study the separate and combined effects of sprays to control blight and aphids on potatoes - Great Harpenden II.

Sponsors: O.J. Stedman, R.W. Gibson.

Design: 4 randomised blocks of 7 plots split into 3.

Whole plot dimensions: 8.53 x 9.53.

Treatments: All combinations of:-

Whole plots: 1. Blight fungicide: — FUNGCIDE

- None — NONE
- Mancozeb applied on 21 July at 1.3 kg in 450 l — MANCOZEB

2. Aphicide: — APHICIDE

- None — NONE
- Demeton-s-methyl applied early, on 24 June at 0.25 kg in 450 l — DEMETONE
- Demeton-s-methyl applied with the blight spray on 21 July on 0.25 kg in 450 l — DEMETONL

Sub plots: 3. Varieties: — VARIETY

- King Edward — EDWARD
- Majestic — MAJESTIC
- Pentland Crown — CROWN

together with one extra treatment, sprayed mancozeb only and split for varieties as above, plot used for sampling (no yields recorded).

Basal applications: Manures: (13:13:20) at 1510 kg. Weedkillers: Linuron at 1.1 kg with paraquat at 0.42 kg ion in 450 l.

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Cultivations, etc.:- Ploughed: 14 Jan, 1975. Spring-tine cultivated and NPK applied: 30 Apr. Spiked rotary cultivated and potatoes machine planted: 6 May. Grubbed: 14 May. Rotary ridged: 22 May. Weedkillers applied: 30 May. Grubbed: 25 June. Rotary ridged: 4 July. Haulm mechanically destroyed: 25 Sept. Sprayed with undiluted BOV at 170 l: 1 Oct. Lifted: 15 Oct. Previous crops: Barley 1973 and 1974.

NOTE: Tuber samples were taken for blight determination.

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75/R/P/4

TOTAL TUBERS TONNES/HECTARE

*** TABLES OF MEANS ***

APHICIDE FUNGCIDE	NONE	DEMETONE	DEMETONL	MEAN
NONE	20.9	22.4	21.4	21.6
MANCOZEB	21.7	23.6	21.7	22.3
MEAN	21.3	23.0	21.5	21.9

VARIETY FUNGCIDE	EDWARD	MAJESTIC	CROWN	MEAN
NONE	18.5	19.0	27.2	21.6
MANCOZEB	19.5	19.6	27.8	22.3
MEAN	19.0	19.3	27.5	21.9

VARIETY APHICIDE	EDWARD	MAJESTIC	CROWN	MEAN
NONE	18.7	18.5	26.7	21.3
DEMETONE	20.0	20.8	28.2	23.0
DEMETONL	18.4	18.7	27.6	21.5
MEAN	19.0	19.3	27.5	21.9

FUNGCIDE	VARIETY APHICIDE	EDWARD	MAJESTIC	CROWN
NONE	NONE	18.3	17.9	26.6
	DEMETONE	19.3	20.6	27.3
	DEMETONL	18.0	18.5	27.6
MANCOZEB	NONE	19.1	19.1	26.8
	DEMETONE	20.6	21.0	29.1
	DEMETONL	18.8	18.9	27.5

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

TABLE	FUNGCIDE	APHICIDE	VARIETY	FUNGCIDE APHICIDE
SED	0.36	0.44	0.49	0.62

TABLE	FUNGCIDE VARIETY	APHICIDE VARIETY	FUNGCIDE APHICIDE VARIETY
SED	0.67	0.82	1.16

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:

FUNGCIDE	0.69		
APHICIDE		0.85	
FUNGCIDE.APHICIDE			1.20

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75/R/P/4

TOTAL TUBERS TONNES/HECTARE

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.88	4.0
BLOCK.WP.SP	36	1.69	7.7

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

APHICIDE	NONE	DEMETONE	DEMETONL	MEAN
FUNGCIDE				
NONE	89.1	91.0	89.7	89.9
MANCOZEB	90.0	90.8	89.6	90.1
MEAN	89.6	90.9	89.7	90.0

VARIETY	EDWARD	MAJESTIC	CROWN	MEAN
FUNGCIDE				
NONE	82.2	90.5	97.1	89.9
MANCOZEB	82.4	90.6	97.3	90.1
MEAN	82.3	90.6	97.2	90.0

VARIETY	EDWARD	MAJESTIC	CROWN	MEAN
APHICIDE				
NONE	81.8	89.9	97.0	89.6
DEMETONE	83.7	91.8	97.1	90.9
DEMETONL	81.5	90.0	97.5	89.7
MEAN	82.3	90.6	97.2	90.0

	VARIETY	EDWARD	MAJESTIC	CROWN
FUNGCIDE	APHICIDE			
NONE	NONE	80.4	90.0	96.9
	DEMETONE	84.2	92.0	96.8
	DEMETONL	82.0	89.5	97.7
MANCOZEB	NONE	83.2	89.8	97.2
	DEMETONE	83.2	91.7	97.4
	DEMETONL	80.9	90.5	97.4

SUB PLOT AREA HARVESTED 0.00271

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75/R/P/6

POTATOES

NUTRIENTS AND BRUISING

Object: To study the effects of forms of nutrients on susceptibility to bruising and on yield of two varieties of potato - Long Hoos V1.

Sponsor: D.M. McIlroy.

Design: 2 randomised blocks of 36 plots.

Whole plot dimensions: 3.55 x 6.25.

Treatments: All combinations of:-

1. Varieties:

	VARIETY
King Edward	EDWARD
Record	RECORD

2. Form of nitrogen (at 200 kg N):

	N FORM
Calcium nitrate	NITRATE
Urea (+ nitrification inhibitor - 'N-Serve')	UREA

3. Form of cation:

	CAT FORM
All as potassium (250 kg K20)	K
All as sodium (140 kg NA20)	NA
Part as potassium (125 kg K20), part as sodium (70 kg NA20)	K NA

4. Form of anion:

	AN FORM
All as chloride	CL
All as sulphate	SO4
Half as sulphate, half as chloride	CL SO4

NOTE: Fertiliser treatments were applied on 21 Apr, 1975.

Basal applications: Manures: 250 kg P205 as triple superphosphate.
Weedkillers: Linuron at 1.1 kg and paraquat at 0.42 kg ion in 340 l.

Seed: King Edward, once grown Rothamsted seed.
Record, AA Certificate.

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Cultivations, etc.:- Ploughed: 19 Sept, 1974. P applied: 26 Mar, 1975. Spring-tine cultivated: 16 Apr. Power harrowed: 28 Apr. Rotary cultivated, ridged, potatoes planted by hand and covered in: 5 May. Weedkillers applied: 23 May. Lifted: 20 Oct. Previous crops: Beans 1973, barley 1974.

NOTES: (1) Counts of plant emergence were made on 12 June and of stem numbers on 1 July. Soil pH was determined on 9 July.
(2) The average depth of bruises and dry matter of the stem end of the cortex were determined at harvest.

TOTAL TUBERS TONNES/HECTARE

*** TABLES OF MEANS ***

N FORM / VARIETY	NITRATE	UREA	MEAN
EDWARD	19.5	21.1	20.3
RECORD	18.6	20.5	19.6
MEAN	19.1	20.8	19.9

CAT FORM / VARIETY	K	NA	K NA	MEAN
EDWARD	21.6	19.5	19.6	20.3
RECORD	18.2	20.2	20.2	19.6
MEAN	19.9	19.9	19.9	19.9

CAT FORM / N FORM	K	NA	K NA	MEAN
NITRATE	19.3	19.8	18.1	19.1
UREA	20.6	19.9	21.8	20.8
MEAN	19.9	19.9	19.9	19.9

AN FORM / VARIETY	CL	SO4	CL SO4	MEAN
EDWARD	20.5	19.4	20.9	20.3
RECORD	21.2	18.2	19.3	19.6
MEAN	20.9	18.8	20.1	19.9

AN FORM / N FORM	CL	SO4	CL SO4	MEAN
NITRATE	20.3	17.6	19.3	19.1
UREA	21.5	20.0	20.9	20.8
MEAN	20.9	18.8	20.1	19.9

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75/R/P/6

TOTAL TUBERS TONNES/HECTARE

*** TABLES OF MEANS ***

AN FORM / CAT FORM	CL	SO4	CL SO4	MEAN
K	20.5	19.9	19.5	19.9
NA	20.1	18.5	21.1	19.9
K NA	22.1	18.0	19.7	19.9
MEAN	20.9	18.8	20.1	19.9

N FORM	NITRATE			UREA		
CAT FORM	K	NA	K NA	K	NA	K NA
VARIETY						
EDWARD	21.0	19.7	17.7	22.3	19.3	21.6
RECORD	17.6	19.9	18.4	18.9	20.5	22.0

N FORM	NITRATE			UREA		
AN FORM	CL	SO4	CL SO4	CL	SO4	CL SO4
VARIETY						
EDWARD	19.8	18.4	20.2	21.3	20.3	21.6
RECORD	20.7	16.8	18.5	21.7	19.7	20.1

VARIETY	AN FORM / CAT FORM	CL	SO4	CL SO4
EDWARD	K	21.9	23.1	19.9
	NA	19.6	18.2	20.8
	K NA	20.1	16.9	22.0
RECORD	K	19.0	16.6	19.1
	NA	20.5	18.8	21.4
	K NA	24.1	19.2	17.4

N FORM	AN FORM / CAT FORM	CL	SO4	CL SO4
NITRATE	K	17.6	20.4	19.8
	NA	21.3	16.6	21.6
	K NA	21.9	15.8	16.6
UREA	K	23.3	19.3	19.2
	NA	18.8	20.4	20.6
	K NA	22.3	20.3	22.8

VARIETY	N FORM	AN FORM / CAT FORM	CL	SO4	CL SO4
EDWARD	NITRATE	K	19.7	22.9	20.4
		NA	19.1	18.4	21.7
		K NA	20.6	14.0	18.5
	UREA	K	24.1	23.4	19.4
		NA	20.2	17.9	19.8
		K NA	19.5	19.7	25.5
RECORD	NITRATE	K	15.6	17.9	19.2
		NA	23.4	14.9	21.5
		K NA	23.1	17.5	14.6
	UREA	K	22.5	15.3	19.0
		NA	17.5	22.8	21.3
		K NA	25.1	20.9	20.1

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75/R/P/6

TOTAL TUBERS TONNES/HECTARE

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

TABLE	VARIETY	N FORM	CAT FORM	AN FORM
SED	0.36	0.86	1.05	1.05

TABLE	VARIETY N FORM	VARIETY CAT FORM	N FORM CAT FORM	VARIETY AN FORM
SED	1.21	1.48	1.48	1.48

TABLE	N FORM AN FORM	CAT FORM AN FORM	VARIETY N FORM CAT FORM	VARIETY N FORM AN FORM
SED	1.48	1.81	2.10	2.10

TABLE	VARIETY CAT FORM AN FORM	N FORM CAT FORM AN FORM	VARIETY N FORM CAT FORM AN FORM
SED	2.57	2.57	3.63

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

STRATUM	DF	SE	CV%
BLOCK.WP	35	3.63	18.2

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75/R/P/6

PERCENTAGE WARE 3.18 CM (1.25 INCH) RIDDLE

*** TABLES OF MEANS ***

N FORM	NITRATE	UREA	MEAN
VARIETY			
EDWARD	86.2	85.5	85.8
RECORD	88.9	87.9	88.4
MEAN	87.5	86.7	87.1

CAT FORM	K	NA	K NA	MEAN
VARIETY				
EDWARD	85.9	85.7	85.9	85.8
RECORD	89.2	87.6	88.4	88.4
MEAN	87.6	86.7	87.1	87.1

CAT FORM	K	NA	K NA	MEAN
N FORM				
NITRATE	87.7	87.4	87.6	87.5
UREA	87.5	86.0	86.6	86.7
MEAN	87.6	86.7	87.1	87.1

AN FORM	CL	SO4	CL SO4	MEAN
VARIETY				
EDWARD	86.2	84.0	87.3	85.8
RECORD	89.2	87.7	88.4	88.4
MEAN	87.7	85.8	87.8	87.1

AN FORM	CL	SO4	CL SO4	MEAN
N FORM				
NITRATE	88.0	86.7	87.9	87.5
UREA	87.3	85.0	87.8	86.7
MEAN	87.7	85.8	87.8	87.1

AN FORM	CL	SO4	CL SO4	MEAN
CAT FORM				
K	88.7	86.2	87.9	87.6
NA	86.7	85.4	87.9	86.7
K NA	87.7	85.9	87.7	87.1
MEAN	87.7	85.8	87.8	87.1

N FORM	NITRATE			UREA		
CAT FORM	K	NA	K NA	K	NA	K NA
VARIETY						
EDWARD	85.7	87.0	86.0	86.1	84.5	85.7
RECORD	89.6	87.3	89.2	88.8	87.5	87.5

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PERCENTAGE WARE 3.18CM (1.25 INCH) RIDDLE

*** TABLES OF MEANS ***

N FORM	NITRATE			UREA		
AN FORM	CL	SO4	CL SO4	CL	SO4	CL SO4
VARIETY						
EDWARD	86.1	85.2	87.3	86.3	82.8	87.3
RECORD	90.0	88.2	88.4	88.4	87.1	88.3

	AN FORM	CL	SO4	CL SO4
VARIETY	CAT FORM			
EDWARD	K	87.3	84.2	86.3
	NA	86.0	83.3	87.9
	K NA	85.3	84.6	87.7
RECORD	K	90.0	88.2	89.5
	NA	87.4	87.5	87.9
	K NA	90.1	87.3	87.7

	AN FORM	CL	SO4	CL SO4
N FORM	CAT FORM			
NITRATE	K	88.1	86.7	88.1
	NA	88.3	85.6	88.2
	K NA	87.7	87.8	87.3
UREA	K	89.2	85.6	87.6
	NA	85.1	85.3	87.6
	K NA	87.7	84.0	88.2

		AN FORM	CL	SO4	CL SO4
VARIETY	N FORM	CAT FORM			
EDWARD	NITRATE	K	85.4	85.9	85.8
		NA	87.9	84.5	88.4
		K NA	85.1	85.2	87.6
	UREA	K	89.2	82.4	86.7
		NA	84.1	82.1	87.4
		K NA	85.5	83.9	87.8
RECORD	NITRATE	K	90.9	87.5	90.5
		NA	88.7	86.6	88.0
		K NA	90.2	90.4	86.9
	UREA	K	89.1	88.8	88.6
		NA	86.1	88.4	87.8
		K NA	90.0	84.1	88.5

PLOT AREA HARVESTED 0.00076

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