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88/R/P/1 and 88/W/P/1 Varieties - Potatoes

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88/R/P/1 and 88/W/P/1

POTATOES

VARIETIES

Object: To compare the quality and yield of some of the newer varieties of potato with current standards on two soil types - Rothamsted Pastures (R), Woburn White Horse (W).

Sponsor: R. Moffitt.

Design: 4 randomised blocks of 8 plots.

Whole plot dimensions: 3.0 x 7.0.

Treatments:

VARIETY	Varieties:
CARA	Cara
CROWN	Pentland Crown
DESIREE	Desiree
DE+CAO	Desiree given calcium peroxide in the ridge at planting
ESTIMA	Estima
KINGSTON	Kingston
ROMANO	Romano
WILJA	Wilja

NOTE: Calcium peroxide was applied as granules at a rate of 370 kg (10 g per tuber) applied to planted tuber before covering.

Basal applications:

Pastures (R): Manures: (0:18:36) at 690 kg. FYM at 35 t. (10:10:15+4.5 Mg) at 1960 kg. Weedkiller: Linuron at 1.65 kg in 260 l. Fungicides: Dithiocarbamate complex at 1.4 kg in 200 l applied twice. Mancozeb at 1.4 kg in 200 l on five occasions applied with the insecticide on the first two. Fentin hydroxide at 0.27 kg in 200 l. Insecticide: Pirimicarb at 0.14 kg. Desiccant: Diquat at 0.80 kg ion in 200 l.

White Horse (W): Manures: (0:18:36) at 690 kg. (10:10:15+4.5 Mg) at 2400 kg. Weedkillers: Paraquat at 0.40 kg ion in 200 l. Linuron at 1.5 kg with paraquat at 0.40 kg ion in 220 l. Fungicides: Mancozeb at 1.4 kg in 220 l on five occasions applied with the insecticide on the first, second and fifth occasions. Fentin hydroxide at 0.28 kg in 220 l. Nematicide: Oxamyl at 5.5 kg. Insecticide: Pirimicarb at 0.14 kg. Desiccant: Diquat at 0.80 kg ion in 400 l.

Cultivations, etc.:-

Pastures (R): PK applied: 13 Oct, 1987. FYM applied: 10 Dec. Ploughed: 17 Dec. NPK Mg applied: 6 Apr, 1988. Rotary harrowed, ridged, hand planted and split back: 11 Apr. Ridged: 26 Apr. Linuron applied: 5 May. Mancozeb and pirimicarb applied: 15 and 30 June. Dithiocarbamate complex applied: 6 and 8 July. Mancozeb applied: 18 July, 1 and 15 Aug. Fentin hydroxide applied: 30 Aug. Haulm mechanically destroyed: 14 Sept. Desiccant applied: 20 Sept. Lifted: 31 Oct. Previous crops: W. wheat 1986, s. beans 1987.

88/R/P/1 and 88/W/P/1

Cultivations, etc.:-

White Horse (W): Paraquat applied: 21 Sept, 1987. PK applied: 25 Sept. NPK Mg applied: 7 Apr, 1988. Oxamyl applied, rotary cultivated and ridged, hand planted, split back ridges: 15 Apr. Rotary ridged, linuron and paraquat applied: 12 May. Mancozeb applied: 15 July, 1 Aug. Mancozeb and pirimicarb applied: 14 June, 7 July and 15 Aug. Fentin hydroxide applied: 30 Aug. Desiccant applied: 15 Sept. Haulm mechanically destroyed: 29 Sept. Lifted: 14 Oct. Previous crops: Mixed w. cereals 1986, w. oats 1987.

NOTE: On Pastures (R) one of the plots of CROWN was severely infested with thistles. An estimated value was used in the analysis.

88/R/P/1 PASTURES (R)

TOTAL TUBERS TONNES/HECTARE

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

VARIETY	
CARA	80.7
CROWN	77.7
DESIREE	63.4
DE+CAO	63.5
ESTIMA	74.7
KINGSTON	68.1
ROMANO	66.3
WILJA	67.9
Mean	70.3

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

VARIETY
3.54

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	20	5.00	7.1

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

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

VARIETY	
CARA	98.0
CROWN	98.5
DESIREE	97.0
DE+CAO	96.8
ESTIMA	98.3
KINGSTON	97.4
ROMANO	98.0
WILJA	96.8
Mean	97.6

PLOT AREA HARVESTED 0.00105

88/W/P/1 WHITE HORSE (W)

TOTAL TUBERS TONNES/HECTARE

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

VARIETY	
CARA	83.3
CROWN	76.3
DESIREE	60.4
DE+CAO	53.6
ESTIMA	72.5
KINGSTON	72.9
ROMANO	62.7
WILJA	74.4
Mean	69.5

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

VARIETY
3.24

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	21	4.59	6.6

PERCENTAGE WARE 3.81 CM (1.5 INCH) RIDDLE

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

VARIETY	
CARA	96.3
CROWN	96.2
DESIREE	94.5
DE+CAO	93.8
ESTIMA	95.2
KINGSTON	95.5
ROMANO	95.3
WILJA	93.7
Mean	95.0

PLOT AREA HARVESTED 0.00105