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Yields of the Field Experiments 1975

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75/ R/RN/8 - Cultivation/WEEDKILLER - Barley

Rothamsted Research

Rothamsted Research (1976) 75/ R/RN/8 - Cultivation/WEEDKILLER - Barley ; Yields Of The Field Experiments 1975, pp 97 - 99 - DOI: <https://doi.org/10.23637/ERADOC-1-141>

75/R/RN/8

CULTIVATION/WEEDKILLER

Object: To study the long term effects of weedkillers and different methods of primary cultivation on a rotation of crops - Great Harpenden I.

Sponsors: R. Moffitt, G.V. Dyke, J.A. Currie.

The 15th year, barley.

For previous years see 'Details' 1967, 68/E/6(t), 69/R/RN/8(t), 70/R/RN/8, 71/R/RN/8(t) and 72-74/R/RN/8.

Design: 2 randomised blocks of 12 plots split into 2.

Whole plot dimensions: 12.8 x 15.2.

Treatments: All combinations of:-

Whole plots: 1. Primary cultivations annually:

CULTIVTN

Ploughed, 19 Mar, 1975

PLOUGH

Rotary cultivated, 20 Mar

ROTAVATE

Deep-tine cultivated twice, 17, 18 Mar

DEEPTINE

2. Weed control to potatoes 1974:

WEEDCNTL(74)

Mechanical

MECHANCL

Linuron plus paraquat

LIN/PAR

Linuron plus paraquat. Grubbed and rotary ridged

LIN/PARR

Sub plots: 3. Hormone weedkiller to barley 1975:

WEEDKILL(75)

None

NONE

Dicamba plus mecoprop and MCPA ('Tetralex Plus' at 7.0 l in 220 l) 6 June, 1975

DI/ME/MC

4. Paraquat weedkiller to wheat stubble autumn 1973:

WEEDKILL(73)

None

NONE

Paraquat

PARAQUAT

plus three extra treatments:-

EXTRA

75/R/RN/8

Spike rotary cultivated, 23 Apr. Given linuron plus paraquat to potatoes 1974, with sub plot treatments 3 and 4 above.

SPIKE

Shallow ploughed, 28 Feb. Given linuron plus paraquat to potatoes 1974, whole plot given paraquat as 4 above, with sub plot treatment 3 above

(SH)PLCH

Standard cultivations as considered best for each crop. Deep-tine cultivated twice, 19 Mar for barley. Given linuron plus paraquat and grubbed and rotary ridged to potatoes 1974, with sub plot treatments 3 and 4 above.

STANDARD

Basal applications: Manures (20:14:14) at 380 kg combine drilled.

Seed: Julia, dressed with ethirimol, sown at 160 kg.

Cultivations, etc.: Spring-tine cultivated: 24 Dec, 1974. Seed sown: 23 Apr, 1975. Combine harvested: 21 Aug.

75/R/RN/3

BARLEY

GRAIN TONNES/HECTARE

*** TABLES OF MEANS ***

OMITTING EXTRA PLOTS

CULTIVTN	PLOUGH	ROTAVATE	DEEPTINE	MEAN
WEEDCNTL(74)				
MECHANCL	3.70	3.33	3.68	3.57
LIN/PAR	3.79	3.55	3.72	3.69
LIN/PARR	3.83	3.43	4.09	3.78
WEEDKLLR(75)				
NONE	3.89	3.74	3.54	3.72
DI/ME/MC	3.66	3.14	4.12	3.64
WEEDKLLR(73)				
NONE	3.94	3.56	3.73	3.74
PARAQUAT	3.61	3.32	3.94	3.62
MEAN	3.77	3.44	3.83	3.68

EXTRA PLOTS ONLY

EXTRA	SPIKE	(SH)PLGH	STANDARD
WEEDKLLR(75)			
NONE	3.53	4.06	3.89
DI/ME/MC	3.80	4.15	4.51
WEEDKLLR(73)			
NONE	4.04		4.00
PARAQUAT	3.29	4.11	4.39
MEAN	3.66	4.11	4.20

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

TABLE	CULTIVTN	WEEDCNTL(74)	WEEDKLLR(73)	WEEDKLLR(75)
SED	0.189	0.189	0.143	0.143

TABLE	CULTIVTN	CULTIVTN	CULTIVTN
	WEEDCNTL(74)	WEEDKLLR(73)	WEEDKLLR(75)
SED	0.328	0.258	0.258
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
CULTIVTN		0.248	0.248

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

STRATUM	DF	SE	CV%
BLOCK.WP	8	0.328	8.9
BLOCK.WP.SP	8	0.429	11.7

GRAND MEAN 3.76

GRAIN MEAN DM% 81.6

SUB PLOT AREA HARVESTED 0.00434

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