ROTHAMSTED RESEARCH

Yields of the Field Experiments 1986

Full Table of Content

86/R/RN/8 Cultivation/WEEDKILLER - W. Barley

Rothamsted Research

Rothamsted Research (1987) *86/R/RN/8 Cultivation/WEEDKILLER - W. Barley ;* Yields Of The Field Experiments 1986, pp 72 - 73 **- DOI: https://doi.org/10.23637/ERADOC-1-36**

86/R/RN/8

CULTIVATION/WEEDKILLER

Object: To study the long-term effects of different methods of primary cultivation on a sequence of crops; weedkillers were also tested until 1981 - Great Harpenden I.

Sponsor: R. Moffitt.

The 26th year, w. barley.

For previous years see 'Details' 1967 and 1973 and 74-85/R/RN/8.

Design: 2 randomised blocks of 12 plots.

Whole plot dimensions: 12.8 x 12.2.

Treatments: All combinations of:-

Whole plots

1. CLT CHOP	Primary cultivations annually; straw chopped since 1985:
PLOUGH	Ploughed: 14 Oct, 1985. Rotary harrowed: 16 Oct
ROTA DIG	Cultivated by rotary digger: 14 Oct
DEEPTINE	Deep-tine cultivated, 3 times: 18 Sept
2. SUBSOIL(82)	Subsoiling in September 1982:
NONE	None
CNVNTIAL	Conventional vertical tine
PARAPLOW	'Paraplow'
XTR BURN	plus three extra plots with straw burnt since 1985 direct drilled until 1984, heavy spring-tine cultivated twice, on 17 September, 1985, in addition to basal cultivating, differing in subsoiling in September 1982:
NONE	None
CNVNTIAL	Conventional vertical tine
PARAPLOW	'Paraplow'

NOTES: (1) Straw was chopped on 13 Aug, 1985 and was burnt on XTR BURN on 2 Sept. All plots were sprayed with paraquat at 0.60 kg ion in 200 l on 10 Oct, spring-tine cultivated and disced on 17 Oct and drilled on 18 Oct.

(2) The conventional vertical tine subsoiler had tines 76 cm apart and worked at a depth of about 50 cm.

(3) The 'Paraplow' had rigid tines set at a 45 degree angle. The tip of each tine was in line with the attachment of an adjacent tine. The tines were 51 cm apart and worked at a depth of about 38 cm.

https://doi.org/10.23637/ERADOC-1-36

86/R/RN/8

Basal applications: Manures: 'Nitram' at 130 kg and later at 340 kg.
Weedkillers: Clopyralid at 0.07 kg, bromoxynil octanoate at 0.34 kg, mecoprop at 2.5 kg and isoproturon at 2.1 kg in 200 l.

Seed: Igri, sown at 160 kg.

Cultivations, etc.:- First N applied: 13 Mar, 1986. Second N applied: 11 Apr. Weedkillers applied: 29 Apr. Combine harvested: 1 Aug.

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

SUBSOIL(82) CLT CHOP	NONE	CNVNTIAL	PARAPLOW	MEAN
PLOUGH	6.51	6.10	6.10	6.24
ROTA DIG	6.42	6.09	6.46	6.32
DEEPTINE	6.75	6.37	6.73	6.62
MEAN	6.56	6.18	6.43	6.39

XTR BURN	NONE	CNVNTIAL	PARAPLOW	MEAN
	6.85	6.71	6.63	6.73

GRAND MEAN 6.48

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

TABLE	CLT CHOP	SUBSOIL(82)	XTR BURN	CLT CHOP SUBSOIL(82)
SED	0.157	0.157	0.271	0.271

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

STRATUM	DF	SE	CV%
BLOCK.WP	11	0.271	4.2

GRAIN MEAN DM% 83.5

PLOT AREA HARVESTED 0.00282

https://doi.org/10.23637/ERADOC-1-36