

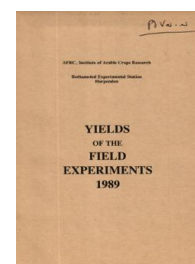
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89/R/CS/326 and 89/W/CS/326 Amounts of Straw - W. Wheat

Rothamsted Research

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89/R/CS/326 and 89/W/CS/326

AMOUNTS OF STRAW

Object: To study the effects of a range of amounts of straw incorporated into the soil on w.wheat - Rothamsted (R) Great Knott III, Woburn (W) Far Field I.

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The third year, w. wheat.

For previous years see 87-88/R&W/CS/326.

Design: 4 randomised blocks of 4 plots (R).
3 randomised blocks of 4 plots (W).

Whole plot dimensions: 3.0 x 13.5 (R).
3.0 x 14.5 (W).

Treatments:

STRAW Amounts of straw incorporated into seedbed (t ha 85% DM), cumulative to previous annual dressings:

		R	W
NONE	None	-	-
NORMAL	Normal	3.3	5.8
2 NORMAL	Twice normal	6.6	11.6
4 NORMAL	Four times normal	13.2	23.2

NOTES: (1) Straw treatments were applied on 2 Sept (R), 5 Sept (W) and chopped by trailed straw chopper and spread on 5 Sept, 1988 (R), 7 Sept (W).

(2) At Rothamsted straw was incorporated by 'I.E.R. Mixaplug' on 14 Sept. At Woburn it was heavy-tine cultivated in to 10 cm twice on 21 Sept, spring-tined with crumbler attached on 21 Oct.

Basal applications:

Great Knott III (R): Manures: Magnesial limestone at 5.0 t. (0:18:36) at 920 kg. 'Nitram' at 120 kg followed by 580 kg. Weedkillers: Paraquat at 0.60 kg ion in 200 l. Isoproturon at 2.5 kg in 200 l. Metsulfuron-methyl at 6.0 g with fluroxypyr at 0.15 kg in 200 l. Fungicides: Chlorothalonil at 1.0 kg in 200 l. Propiconazole at 0.12 kg with tridemorph at 0.52 kg in 200 l.
Far Field I (W): Manures: (0:18:36) at 920 kg. 'Nitram' at 120 kg followed by 590 kg. Weedkillers: Glyphosate at 1.1 kg in 220 l. Paraquat at 0.80 kg ion in 220 l. Isoproturon at 1.5 kg in 220 l. Fungicides: Chlorothalonil at 1.0 kg in 220 l. Propiconazole at 0.12 kg with tridemorph at 0.52 kg in 220 l.

Seed: Rendezvous, sown at 180 kg.

89/R/CS/326 and 89/W/CS/326

Cultivations, etc.:-

Great Knott III (R): Magnesian limestone applied: 6 Sept, 1988.
Ploughed: 14 Sept. PK applied: 29 Sept. Paraquat applied:
18 Oct. Rotary harrowed, seed sown, harrowed: 19 Oct.
Isoproturon applied: 29 Oct. N applied: 21 Feb, 1989 and 14 Apr.
Metsulfuron-methyl and fluroxypyr applied: 15 Apr. Chlorothalonil
applied: 19 May. Propiconazole and tridemorph applied: 20 June.
Combine harvested: 5 Aug.

Far Field I (W): PK applied: 16 Sept, 1988. Subsoiled with tines
140 cm apart, 40 cm deep: 20 Sept. Rolled: 3 Oct. Paraquat
applied: 19 Oct. Spring-tine cultivated with crumbler attached,
seed sown, harrowed: 21 Oct. Isoproturon applied: 8 Dec. N
applied: 8 Mar, 1989 and 28 Apr. Chlorothalonil applied: 23 May.
Propiconazole and tridemorph applied: 22 June. Combine harvested:
4 Aug.

NOTES: (1) Establishment counts were made in autumn. Shoot numbers and
dry weight at growth stage 30, dry weight and fertile ear
numbers after anthesis and harvest index were measured.

(2) Foliar diseases and foot and root rots were assessed in
summer.

89/R/CS/326 GREAT KNOTT III (R)

GRAIN TONNES/HECTARE

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

STRAW	
NONE	7.42
NORMAL	7.33
2 NORMAL	7.39
4 NORMAL	7.24
Mean	7.35

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

STRAW
0.193

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	9	0.273	3.7
GRAIN MEAN DM%	87.0		
PLOT AREA HARVESTED	0.00299		

89/W/CS/326 FAR FIELD I (W)

GRAIN TONNES/HECTARE

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

STRAW	
NONE	7.72
NORMAL	7.43
2 NORMAL	7.45
4 NORMAL	7.60
Mean	7.55

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

STRAW
0.337

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	6	0.413	5.5
GRAIN MEAN DM%	86.9		
PLOT AREA HARVESTED	0.00434		