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# Yields of the Field Experiments 1982



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# 82/W/CS/11 Soil Structure - S. Barley

## **Rothamsted Research**

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#### 82/W/CS/11

### SOIL STRUCTURE

Object: To study the direct effects of sowing dates and times of applying nitrogen and the residual effects of peat on the nutrient contents and yields of s. barley - Woburn Stackyard II.

Sponsor: A.E. Johnston.

The 20th year, s. barley.

For previous years see 64/C/20(t), 65/C/19(t), 66/C/11(t), 67/C/8(t), 68/C/31(t), 69/W/CS/11(t), 70/W/CS/11(t), 71/W/CS/11, 72/W/CS/11(t) and 73-81/W/CS/11.

Design: Single replicate of 20 plots.

Whole plot dimensions: 2.13 x 3.05.

Treatments: Combinations of:-

1.	PEAT	Peat (tonnes dry matter - total applied 1963-72):
	0 1 2 3 4	0 8 55 110 165
2.	SOW DATE	Dates of sowing:
	9 FEB 9 MAR 24 MAR 13 APR	9 February, 1982 9 March 24 March 13 April
3.	N	Times of applying nitrogen fertilizer at 96 kg N:
	NS NL	Never On the date of sowing On 11 May for SOW DATE 9 FEB and 9 MAR; on 17 May for SOW DATE 24 MAR; on 28 May for SOW DATE 13 APR

Basal applications: Manures: P at 85 kg as triple superphosphate, K at 300 kg as potassium bicarbonate, Mg at 55 kg as magnesium sulphate. Fungicides: Carbendazim with maneb and tridemorph (as 'Cosmic' at 4.0 kg) with captafol at 1.0 l in 280 l with the insecticide on two occasions. Insecticide: Pirimicarb at 0.14 kg.

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

Cultivations, etc.:- P, K, Mg applied: 6 Jan, 1982. Hand dug: 1 Feb. Fungicides with insecticide applied: 19 May, 4 June. Hand harvested: 16 Aug.

NOTE: Crop samples were taken at regular intervals during the season for N,  $\,$  P, K and Mg analysis.

82/W/CS/11

GRAIN TONNES/HECTARE

GRAIN MEAN DM% 85.8

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

			5.14	GRAND MEAN	
NL	NS	-	N		
			PEAT	SOW DATE	
		2.67	0	9 FEB	
	6.73		1	9 FEB	
6.32			2	9 FEB	
		2.02	2 3 4	9 FEB	
	6.93		4	9 FEB	
		2.09	0	9 MAR	
	7.17		1	9 MAR	
6.19	2.5-7		2	9 MAR	
0.13		2.46	1 2 3	9 MAR	
	7.19		4	9 MAR	
		2.67	0	24 MAR	
	7.50	2007	1	24 MAR	
5.79	7.00		2	24 MAR	
3.73	7.42		2	24 MAR	
	7.12	3.22	4	24 MAR	
	7.40		0	13 APR	
	7.40	2.78	1	13 APR	
5.87		2.70	2	13 APR	
3.07	7.33		2	13 APR	
	7.33	3.00	4	13 APR	
		3.00			

82/W/CS/11

STRAW TONNES/HECTARE

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

GRAND I	MEAN	4.25			
		N	-	NS	NL
SOW	DATE	PEAT			
9	FEB	0	1.90		
9	FEB	1		5.42	
9	FEB	2			5.41
	FEB	1 2 3	1.34		
9	FEB	4		6.04	
9	MAR	0	1.28		
	MAR	1		5.82	
	MAR				5.07
9	MAR	2 3 4	1.79		
9	MAR	4		6.21	
24	MAR	0	1.93		
24	MAR	1		6.49	
24	MAR	2 3 4			5.37
24	MAR	3		6.14	
24	MAR	4	2.27		
13	APR	0		6.14	
	APR	1	2.16		
	APR	2			5.55
	APR	1 2 3 4		6.60	
13	APR	4	2.18		

STRAW MEAN DM% 88.1

PLOT AREA HARVESTED 0.00014