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Yields of the Field Experiments 1972

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72/R/BN/7 Barnfield - Beans, S. Wheat, Barley

Rothamsted Research

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72/R/BN/7

BARNFIELD

Object: Originally studied the effects of organic and inorganic manures on continuous roots. The experiment has been modified to study effects on a four-course rotation and continuous beans.

The fifth year of the new scheme, beans, spring wheat, barley.

For previous years see 'Details' 1967, 68/A/5(t), 69/R/BN/7, 70/R/BN/7(t) and 71/R/BN/7(t).

Plot dimensions and areas harvested:

Wheat and barley (quarter plot): 5.33 x 28.5.

(Strip 1: 3.56 x 28.5). Area harvested: 0.00780.

Beans, Section 1 (half plot): 10.7 x 27.4.

(Strips 1 and 8: 70.1 x 27.4). Area harvested: 0.00878.

Continuous spring beans: Fresh simazine was applied only to those half plots on Sections 1 and 2 which received simazine in 1967 but not subsequently.

Standard applications:

Spring beans: Weedkiller: Paraquat at 0.56 kg ion in 220 l.

Insecticide: Phorate at 1.1 kg applied as granules.

Spring wheat and barley: MCPA, mecoprop and dicamba ('Banlene Plus' at 5.6 l in 220 l).

Seed: Beans: Maris Bead sown at 220 kg.

Spring wheat: Kolibri sown at 190 kg,

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

Cultivations, etc.: P, K, Na and Mg applied: Strip 2 only -

15 Nov, 1971, remainder 30 Nov. FYM applied: 16 Nov.

FYM ploughed in: 17 Nov. Remaining plots ploughed: 9 - 15 Dec.

Spring beans: Paraquat applied: 10 Sept, 1971. Seed drilled:

22 Mar, 1972. Simazine applied to appropriate half plots

at 1.1 kg in 220 l: 2 May. Insecticide applied: 17 June.

Combine harvested: 27 Sept.

Spring wheat: N applied: 21 Mar, 1972. Seed drilled: 22 Mar.

Weedkiller applied: 17 May. Combine harvested: 6 Sept.

Barley: N applied: 21 Mar, 1972. Seed drilled: 22 Mar.

Weedkiller applied: 17 May. Combine harvested: 22 Aug.

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TABLES OF MEANS

BARLEY

GRAIN: TONNES/HECTARE

SERIES

Strip	N	N	A	AC	C
1	0	5.65	-	-	4.94
	1	-	7.02	7.24	-
	2	6.17	-	-	6.37
	3	-	6.97	6.55	-
2	0	-	3.77	3.83	-
	1	6.90	-	-	6.32
	2	-	6.92	6.47	-
	3	5.63	-	-	6.80
4	0	2.18	-	-	1.84
	1	-	4.31	4.77	-
	2	6.53	-	-	6.29
	3	-	6.80	6.93	-
5	0	1.97	-	-	2.25
	1	-	5.63	5.57	-
	2	5.38	-	-	6.87
	3	-	6.13	7.16	-
6	0	-	1.71	1.93	-
	1	4.28	-	-	5.10
	2	-	5.87	7.09	-
	3	6.55	-	-	6.07
7	0	-	1.76	2.28	-
	1	5.25	-	-	5.48
	2	-	6.33	6.77	-
	3	5.59	-	-	6.96
8	0	-	1.67	2.82	-
	1	3.82	-	-	5.13
	2	-	6.23	7.07	-
	3	6.21	-	-	6.90
9	0		1.44		
	1		4.50		
	2		5.04		
	3		6.78		

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Mean D.M. %: 84.8

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BARLEY

STRAW: TONNES/HECTARE

SERIES

Strip	N	N	A	AC	C
1	0	3.54	-	-	3.42
	1	-	6.38	5.79	-
	2	6.76	-	-	5.86
	3	-	6.73	6.56	-
2	0	-	2.03	2.66	-
	1	6.44	-	-	4.59
	2	-	7.09	5.74	-
	3	7.77	-	-	7.62
4	0	1.21	-	-	0.86
	1	-	3.11	2.94	-
	2	5.44	-	-	5.79
	3	-	5.62	5.77	-
5	0	1.07	-	-	0.89
	1	-	3.83	4.11	-
	2	5.06	-	-	5.14
	3	-	5.25	5.36	-
6	0	-	0.87	1.06	-
	1	3.19	-	-	4.23
	2	-	4.79	5.38	-
	3	5.16	-	-	5.90
7	0	-	0.65	0.87	-
	1	3.25	-	-	3.85
	2	-	5.04	5.72	-
	3	5.19	-	-	6.82
8	0	-	0.60	1.19	-
	1	2.62	-	-	3.03
	2	-	4.32	4.74	-
	3	4.68	-	-	5.45
9	0			0.81	
	1			3.11	
	2			4.47	
	3			5.57	

Mean D.M. %: 87.9

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SPRING WHEAT

GRAIN: TONNES/HECTARE

SERIES

Strip	N	SERIES			
		N	A	AC	C
1	0	-	3.22	2.68	-
	1	3.99	-	-	5.29
	2	-	6.51	5.54	-
	3	6.30	-	-	4.90
2	0	2.88	-	-	1.94
	1	-	5.91	5.04	-
	2	5.89	-	-	5.37
	3	-	6.21	5.99	-
4	0	-	0.91	0.68	-
	1	3.69	-	-	2.84
	2	-	2.96	3.20	-
	3	5.34	-	-	4.93
5	0	-	0.90	1.12	-
	1	2.89	-	-	3.23
	2	-	4.43	4.42	-
	3	4.65	-	-	5.17
6	0	1.29	-	-	0.97
	1	-	2.27	2.67	-
	2	3.74	-	-	4.21
	3	-	4.17	4.82	-
7	0	1.06	-	-	1.52
	1	-	3.08	3.59	-
	2	3.50	-	-	4.70
	3	-	5.22	5.48	-
8	0	0.92	-	-	1.41
	1	-	3.00	3.93	-
	2	3.69	-	-	4.49
	3	-	5.01	4.37	-

Mean D.M. %: 83.3

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SPRING WHEAT

STRAW: TONNES/HECTARE

SEROES

Strip	N	N	A	AC	C
1	0	-	4.03	3.19	-
	1	5.01	-	-	7.03
	2	-	8.53	7.18	-
	3	9.81	-	-	7.17
2	0	3.69	-	-	1.87
	1	-	7.13	5.87	-
	2	6.71	-	-	8.28
	3	-	7.64	7.71	-
4	0	-	1.23	0.79	-
	1	4.48	-	-	3.34
	2	-	3.37	3.34	-
	3	6.99	-	-	6.20
5	0	-	1.40	1.56	-
	1	3.02	-	-	3.92
	2	-	5.22	4.79	-
	3	5.38	-	-	6.17
6	0	1.19	-	-	1.40
	1	-	2.91	3.77	-
	2	5.09	-	-	4.28
	3	-	5.50	5.67	-
7	0	1.35	-	-	1.73
	1	-	3.52	4.15	-
	2	3.68	-	-	4.95
	3	-	5.62	5.91	-
8	0	0.81	-	-	1.33
	1	-	2.95	3.56	-
	2	4.11	-	-	4.68
	3	-	4.97	4.29	-

Mean D.M. %: 83.2

72/R/BN/7

BEANS

SIMAZINE

	1967-70	1967-69 & 1971	1967 & 1972	Mean
Strip	GRAIN: TONNES/HECTARE			
1	3.72	2.54	2.72	2.92
2	3.60	3.31	3.54	3.50
4	3.58	3.65	3.01	3.32
5	3.54	2.95	3.28	3.26
6	3.69	3.38	3.07	3.30
7	3.69	3.20	3.42	3.43
8	3.09	2.71	3.05	2.97
Mean	3.56	3.11	3.16	3.24
	STRAW: TONNES/HECTARE			
1	4.20	2.22	2.41	2.81
2	2.74	2.32	2.80	2.66
4	3.00	2.53	1.76	2.27
5	2.49	2.44	1.77	2.12
6	2.82	2.82	1.66	2.24
7	2.41	2.76	2.23	2.41
8	1.76	1.36	1.48	1.52
Mean	2.77	2.35	2.02	2.29

Mean D.M. %: Grain: 82.4
Straw: 51.4