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69/R/BK/1 - Broadbalk - Wheat, Potatoes & Beans

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WHEAT AND THREE-COURSE ROTATION BROADBALK 1969

(69/R/BK/1)

The 126th year, 2nd year of revised scheme

For history, treatments etc. see 'Details' 1967, Station Report for 1966, pp.229-231, Station Report for 1968, Part II and 'Results' 68/A/1.

Areas harvested:

	Area harvested
Wheat: Section 0	0.0107
Section 1	0.0197
Sections 2, 3 and 6	0.0162
Sections 8 and 9	0.0171
Potatoes: Section 4	0.0163
Beans: Section 7	0.0153

Standard applications:-

Winter wheat: Weedkillers: Paraquat at 0.75 lb ion in 20 gals to all sections except 6 (following fallow) and 8 (no weedkillers). Terbutryne and related triazines, ('Prebane' at 4 lb in 25 gals) to all sections except 8. MCPA, mecoprop and dicamba ('Banlene Plus' at 4 pints in 20 gals) to all sections except 8.

Potatoes: Weedkillers: Paraquat at 0.75 lb ion in 20 gals. Paraquat at 0.375 lb ion plus linuron at 0.75 lb in 37 gals. Fungicide: Mancozeb at 1.2 lb in 37 gals on 3 occasions. Insecticide: Demeton-s-methyl at 3.5 oz applied with second application of mancozeb.

Spring beans: Insecticide: Demeton-s-methyl at 3.5 oz in 37 gals (no weedkiller).

Fallow: Weedkiller: Paraquat at 0.75 lb ion in 20 gals.

Section 00: Methyl bromide sub-plots:- No further soil fumigation was carried out for 1969, residual effects of the application in autumn 1967 being tested.

Cultivations, etc.:-

ALL SECTIONS: Autumn fertiliser applied: 25 Sept, 1968. FYM applied: 4 Oct. Ploughed: 1 - 5 Oct.

CROPPED SECTIONS:

Winter wheat: Paraquat applied: 5 - 10 Sept, 1968. Seed drilled at 180 lb: 17 Oct. 'Prebane' applied: 18 Oct. 'Nitro-Chalk' applied: 17 Apr, 1969. MCPA/mecoprop/dicamba applied:

1 May. Combine harvested: 29 Aug.

Cultivations to Section 00: As above except harvested by small combine: 21 Aug.

Potatoes: Paraquat applied: 5 Sept, 1968. 'Nitro-Chalk' applied: 9 Apr, 1969. Potatoes machine planted: 10 Apr. Paraquat plus linuron applied: 12 May. Grubbed: 18 June. Rotary ridged: 23 June. Fungicide applied: 15 July, 4 Aug, 22 Aug. Insecticide applied: 4 Aug. Haulm destroyed mechanically (except treatments N2, N2P, N2PNa and R, where haulm died early): 20 Sept. Lifted: 25 Sept.

Spring beans: Seed drilled at 200 lb: 24 Mar, 1969. 'Nitro-Chalk' applied: 9 Apr. Insecticide applied: 19 June. Combine harvested: 10 Sept.

FALLOW SECTION: Weedkiller applied: 5 Sept, 1968. Ploughed second time: 13 May, 1969, third time: 8 July.

BROADBALK WILDERNESS: Cultivations, etc.:-

Ungrazed meadow (north): Topped with rotary grass cutter: 24 Dec, 1968.

Grazed meadow (centre): Grazed by sheep: 17 - 25 Apr, 1969, 13 - 20 May, 5 - 10 June, 27 June - 4 July, 5 - 12 Aug, 5 - 29 Sept, 27 - 31 Oct. Grass topped: 25 Apr, 21 May, 9 June, 4 July, 12 Aug, 31 Sept.

NOTE: Plots 1, 2A, 2B, 3, 5, 6, 7, 8 and 9 have been re-numbered as Plots 01, 21, 22, 03, 05, 06, 07, 08 and 09 respectively.

SUMMARY OF RESULTS

WHEAT

GRAIN

Section Years after fallow	6	3	2	1	8	9	0	
	1	2	**	3	6*	11	18	Mean
Plot								
01	54.1	49.4	48.6					50.7
21	48.6	55.5	54.3	53.9	38.3	48.1	45.7	49.2
22	47.7	41.6	59.4	40.7	32.1	45.0	37.8	43.5
03	24.1	14.0	26.8	14.7	14.6	14.0	16.9	17.9
05	28.4	15.5	34.9	15.7	14.4	17.9	18.6	20.8
06	41.3	32.5	46.2	30.3	22.2	33.7	33.7	34.3
07	51.2	45.1	51.4	43.2	23.4	43.2	43.6	43.0
08	46.5	47.2	47.2	44.9	37.9	49.4	47.3	45.8
09	46.2	45.8	42.6	46.4	40.0	47.9	42.3	44.4
10	23.1	30.9	35.8	26.4	22.5	26.4	22.3	26.8
11	35.2	36.2	39.8	35.0	22.8	27.2	33.1	32.7
12	37.7	36.7	38.8	36.3	24.5	31.9	38.3	34.9
13	41.7	43.2	44.1	40.9	25.3	46.3	43.0	40.7
14	41.0	44.0	46.4	41.4	31.5	46.1	41.0	41.6
15	46.6	46.7	47.9	46.1	33.0	45.6	40.3	43.7
16	40.9	42.0	46.9	38.8	28.6	41.9	32.1	38.7
17	43.1	40.7	46.6	34.4	29.9	42.4	35.3	38.9
18	41.1	41.5	47.8	35.7	33.4	43.5	33.8	39.5
19	40.4	27.2	36.8	23.4	23.1	25.9	22.9	28.5
20				29.5			29.0	29.2

Mean D.M. %: 82.4

* No herbicide

** After beans

	WHEAT							
	STRAW							
Section	6	3	2	1	8	9	0	
Years after fallow	1	2	**	3	6*	11	18	Mean
Plot								
01	30.8	29.0	28.4					29.4
21	57.2	57.3	65.8	65.2	49.4	58.6	53.8	58.2
22	43.6	37.5	54.6	35.4	42.7	46.1	34.2	42.0
03	15.8	13.2	21.3	14.2	15.4	11.4	14.5	15.1
05	21.4	12.4	28.3	14.8	23.6	15.9	15.5	18.8
06	33.1	33.0	45.8	28.4	36.1	33.8	33.3	34.8
07	47.9	45.4	53.3	43.5	42.3	44.6	44.6	45.9
08	47.1	53.7	52.9	45.4	51.2	54.4	51.7	50.9
09	53.0	48.8	53.4	43.7	55.8	51.8	42.5	49.8
10	15.7	23.7	29.9	25.2	31.3	26.7	24.8	25.3
11	24.7	28.2	32.8	28.3	36.7	24.3	24.1	28.4
12	30.1	29.3	31.7	30.7	38.8	29.2	31.6	31.6
13	38.3	44.4	48.6	41.0	47.0	50.2	43.2	44.7
14	38.6	44.5	43.3	38.6	44.7	45.6	40.9	42.3
15	45.3	48.9	51.5	43.7	50.9	48.6	42.7	47.4
16	37.9	46.4	47.7	33.5	46.8	47.8	45.4	43.6
17	44.8	42.2	48.3	30.9	52.1	45.3	36.2	42.8
18	45.8	40.2	46.7	33.8	52.6	52.1	29.9	43.0
19	35.7	21.9	31.6	19.8	35.6	24.5	25.5	27.8
20				26.3			27.7	27.0

Mean D.M. %: 88.9

* No herbicide

** After beans

WHEAT

GRAIN

SECTION 00. RESIDUAL METHYL BROMIDE TEST

Plot	O	MB	Mean
21	43.2	49.2	46.2
22	36.5	46.6	41.5
03	17.8	20.5	19.1
05	19.8	21.6	20.7
06	34.5	32.9	33.7
07	43.7	42.7	43.2
08	49.9	41.7	45.8
09	38.8	38.0	38.4
10	31.7	26.8	29.3
11	36.8	37.7	37.2
12	39.2	36.8	38.0
13	37.0	37.0	37.0
14	36.5	38.3	37.4
15	37.6	37.3	37.5
16	25.4	37.8	31.6
17	35.6	35.7	35.7
18	34.3	39.4	36.9
19	22.9	29.0	26.0
20	35.5	39.2	37.3
Mean	34.6	36.2	35.4

Mean D.M. %: 78.0

Section	7		4	
	SPRING BEANS		POTATOES	
Plot	GRAIN	STRAW	TOTAL TUBERS	% WARE
01	*	*	14.55	94.4
21	*	*	19.16	92.8
22	*	*	16.00	90.6
03	*	*	5.17	86.0
05	*	*	7.78	82.8
06	22.8	24.5	11.92	90.7
07	25.9	29.1	14.59	94.4
08	25.7	27.9	16.22	93.4
09	28.8	24.2	17.86	93.3
10	16.0	8.8	3.02	75.5
11	11.3	6.0	2.44	61.0
12	8.4	6.7	2.73	61.2
13	27.2	24.7	10.14	93.1
14	21.4	22.3	9.60	89.5
15	24.3	28.1	15.22	94.9
16	27.1	31.9	14.19	92.2
17	27.4	28.4	12.42	93.4
18	28.0	27.7	13.03	92.6
19	21.4	20.1	8.30	86.8
Mean D.M. %: (All plots)	80.0	71.5		

* Yields taken but not printed as the plant population on these plots was affected by drill malfunction.