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Numerical Results of the Field Experiments 1969

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69/R/BN/7 - Barnfield - Potatoes, Sugar Beet & Beans

Rothamsted Research

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BARNFIELD

(69/R/BN/7)

Second year of new scheme, 1969.

For history, treatments, etc., see 'Details' 1967 and 'Results' 68/A/5.

Varieties in 1969: Potatoes: King Edward, sugar beet: Klein E, spring beans: Maris Bead.

Plot areas:

Potatoes and sugar beet (quarter plot):
0.0289 (Strip 1: Potatoes: 0.0193, sugar beet: 0.0217).
Area harvested: Potatoes, 0.0096, sugar beet: 0.0032.
Beans, Section 1 (half plot): 0.0723.
(Strips 1 and 8: 0.0475). Area harvested: 0.0362.
Section 2 (half plot): 0.0241.
(Strips 1 and 8: 0.0158). Area harvested: 0.0129.

Standard applications:

Potatoes: Weedkiller: 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 three occasions. Insecticide: Demeton-s-methyl at 3.5 oz applied with second mancozeb spray.
Sugar beet: Weedkiller: Phenmedipham ('Betanal' at 5 pints in 20 gals) to strips 1 and 2 only. Insecticide: Demeton-s-methyl at 3.5 oz in 37 gals.
Beans: Weedkiller: Diquat ('Reglone' at 3 pints in 25 gals). Insecticide: Demeton-s-methyl at 3.5 oz in 37 gals.

Cultivations, etc.: P, K, Na and Mg applied: 5 Dec, 1968. FYM applied: 6 Dec. All plots ploughed: 9 Dec.

Potatoes: 'Nitro-Chalk' applied: 8 Apr, 1969. Plots rotary cultivated, potatoes machine planted: 9 Apr. Weedkiller applied: 13 May. Grubbed: 18 June. Rotary ridged: 23 June. Fungicide applied: 15 July, 4 Aug, 21 Aug. Insecticide applied: 4 Aug. Haulm destroyed mechanically: 22 Sept. Lifted: 2 Oct.
Sugar beet: Seed drilled at 8 lb: 3 Apr, 1969. 'Nitro-Chalk' applied: 8 Apr. Weedkiller applied: 22 May. Singled: 27 May. Insecticide applied: 19 June. Lifted: 24 Oct.

Spring beans: Diquat applied: 24 Oct, 1968. Seed drilled at
200 lb: 24 Mar, 1969. Simazine applied to half plots at
1 lb in 20 gals: 27 Mar. Insecticide applied: 19 June.
Combine harvested: 10 Sept.

NOTE: Duplicate samples were taken for yield from all quarter plots
of sugar beet to obtain an estimate of within plot variance.

Plot	Yield	Yield	Yield	Yield
1.1	1.1	1.1	1.1	1.1
1.2	1.2	1.2	1.2	1.2
1.3	1.3	1.3	1.3	1.3
1.4	1.4	1.4	1.4	1.4
1.5	1.5	1.5	1.5	1.5
1.6	1.6	1.6	1.6	1.6
1.7	1.7	1.7	1.7	1.7
1.8	1.8	1.8	1.8	1.8
1.9	1.9	1.9	1.9	1.9
1.10	1.10	1.10	1.10	1.10
1.11	1.11	1.11	1.11	1.11
1.12	1.12	1.12	1.12	1.12
1.13	1.13	1.13	1.13	1.13
1.14	1.14	1.14	1.14	1.14
1.15	1.15	1.15	1.15	1.15
1.16	1.16	1.16	1.16	1.16
1.17	1.17	1.17	1.17	1.17
1.18	1.18	1.18	1.18	1.18
1.19	1.19	1.19	1.19	1.19
1.20	1.20	1.20	1.20	1.20

SUMMARY OF RESULTS

POTATOES

TOTAL TUBERS: TONS

SERIES

Strip	N	N	A	AC	C
1	0	-	10.72	9.70	-
	1	13.63	-	-	15.73
	2	-	22.42	17.75	-
2	3	20.23	-	-	19.76
	0	10.38	-	-	8.94
	1	-	16.85	14.41	-
4	2	17.96	-	-	16.64
	3	-	18.37	18.27	-
	0	-	4.20	4.04	-
5	1	10.41	-	-	8.90
	2	-	14.73	13.95	-
	3	16.42	-	-	17.17
6	0	-	3.33	4.35	-
	1	8.86	-	-	9.58
	2	-	13.12	13.34	-
7	3	14.97	-	-	15.11
	0	4.45	-	-	4.36
	1	-	6.64	8.05	-
8	2	11.48	-	-	12.96
	3	-	14.09	14.83	-
	0	4.17	-	-	5.38
9	1	-	7.92	9.73	-
	2	13.61	-	-	12.36
	3	-	13.62	13.92	-
10	0	3.65	-	-	4.40
	1	-	5.73	6.18	-
	2	6.62	-	-	8.05
11	3	-	6.61	8.15	-

POTATOES

% WARE

SERIES

Strip	N	N	A	AC	C
1	0	-	83.2	85.4	-
	1	88.8	-	-	89.8
	2	-	93.1	91.1	-
2	3	95.5	-	-	91.7
	0	81.0	-	-	81.4
	1	-	90.8	87.4	-
4	2	93.3	-	-	90.5
	3	-	93.0	93.1	-
	0	-	74.7	73.9	-
5	1	90.1	-	-	84.4
	2	-	90.1	87.4	-
	3	93.3	-	-	91.5
6	0	-	76.0	76.2	-
	1	86.6	-	-	88.2
	2	-	91.7	90.3	-
7	3	96.1	-	-	93.1
	0	72.7	-	-	79.8
	1	-	86.1	85.7	-
8	2	92.3	-	-	91.2
	3	-	91.5	91.8	-
	0	78.3	-	-	77.8
8	1	-	93.0	87.6	-
	2	90.6	-	-	92.3
	3	-	92.6	93.3	-
8	0	70.5	-	-	74.2
	1	-	84.3	84.1	-
	2	84.1	-	-	87.5
	3	-	86.1	90.0	-

SUGAR BEET

ROOTS (WASHED): TONS

SERIES

Strip	N	N	A	AC	C
1	0	8.16	-	-	7.26
	1	-	19.27	15.49	-
	2	19.17	-	-	18.34
2	3	-	18.86	17.47	-
	0	-	5.90	6.98	-
	1	18.06	-	-	12.05
4	2	-	18.79	15.94	-
	3	18.82	-	-	17.57
	0	4.98	-	-	6.23
5	1	-	9.86	12.43	-
	2	14.06	-	-	16.43
	3	-	16.84	17.64	-
6	0	4.70	-	-	5.00
	1	-	9.24	11.88	-
	2	13.06	-	-	13.72
7	3	-	12.47	13.93	-
	0	-	3.06	4.35	-
	1	7.81	-	-	11.15
8	2	-	12.92	16.53	-
	3	13.65	-	-	16.84
	0	-	3.02	5.02	-
9	1	8.44	-	-	11.29
	2	-	13.68	15.52	-
	3	14.06	-	-	13.68
8	0	-	3.16	5.49	-
	1	6.53	-	-	9.83
	2	-	9.27	13.68	-
9	3	10.80	-	-	12.08
	0	-	-	3.87	-
	1	-	-	9.69	-
9	2	-	-	11.63	-
	3	-	-	14.38	-

SUGAR BEET

SUGAR %

SERIES

Strip	N	N	A	AC	C
1	0	18.5	-	-	18.2
	1	-	19.2	19.4	-
	2	19.4	-	-	19.1
2	3	-	19.5	19.8	-
	0	-	18.8	18.4	-
	1	19.2	-	-	19.0
4	2	-	19.7	19.7	-
	3	19.6	-	-	19.7
	0	19.0	-	-	19.0
5	1	-	19.6	19.6	-
	2	20.0	-	-	19.8
	3	-	20.8	20.1	-
6	0	19.0	-	-	18.1
	1	-	18.9	18.9	-
	2	19.7	-	-	19.4
7	3	-	18.9	18.4	-
	0	-	18.8	18.4	-
	1	19.0	-	-	19.6
8	2	-	20.9	19.7	-
	3	19.5	-	-	20.0
	0	-	18.8	18.7	-
9	1	19.5	-	-	19.3
	2	-	19.5	19.5	-
	3	19.2	-	-	19.3
8	0	-	17.9	18.6	-
	1	19.6	-	-	19.1
	2	-	19.5	19.1	-
	3	18.9	-	-	19.0
9	0	-	17.7	-	-
	1	-	19.6	-	-
	2	-	20.3	-	-
	3	-	20.1	-	-

SUGAR BEET
 TOTAL SUGAR: CWT
 SERIES

Strip	N	N	A	AC	C
1	0	30.2	-	-	26.4
	1	-	73.9	59.7	-
	2	74.3	-	-	69.8
2	3	-	73.4	69.1	-
	0	-	22.1	25.8	-
	1	69.4	-	-	46.0
4	2	-	74.0	62.8	-
	3	73.6	-	-	69.4
	0	18.9	-	-	23.6
5	1	-	38.7	48.8	-
	2	56.2	-	-	65.0
	3	-	69.9	71.0	-
6	0	17.8	-	-	18.1
	1	-	34.8	44.8	-
	2	51.4	-	-	53.3
7	3	-	47.0	51.2	-
	0	-	11.5	16.0	-
	1	29.6	-	-	43.7
8	2	-	53.8	65.0	-
	3	53.3	-	-	67.3
	0	-	11.3	18.7	-
9	1	33.0	-	-	43.6
	2	-	53.4	60.5	-
	3	54.2	-	-	52.9
8	0	-	11.3	20.4	-
	1	25.6	-	-	37.6
	2	-	36.1	52.3	-
9	3	40.9	-	-	45.9
	0	-	13.7	-	-
	1	-	38.0	-	-
9	2	-	47.2	-	-
	3	-	57.7	-	-

SUGAR BEET

TOPS: TONS

Strip	SERIES				
	N	N	A	AC	C
1	0	3.19	-	-	2.64
	1	-	9.03	5.97	-
	2	9.58	-	-	9.31
2	3	-	9.45	9.45	-
	0	-	2.22	2.64	-
	1	7.64	-	-	3.89
4	2	-	10.00	5.97	-
	3	9.17	-	-	6.53
	0	1.94	-	-	1.94
5	1	-	2.64	4.03	-
	2	4.86	-	-	5.97
	3	-	6.39	8.20	-
6	0	1.57	-	-	1.76
	1	-	2.78	4.44	-
	2	4.86	-	-	5.97
7	3	-	6.39	7.78	-
	0	-	1.04	1.57	-
	1	2.64	-	-	3.47
8	2	-	4.44	6.25	-
	3	5.14	-	-	7.22
	0	-	1.46	2.22	-
9	1	3.19	-	-	4.58
	2	-	5.70	7.64	-
	3	8.06	-	-	7.78
8	0	-	1.32	2.13	-
	1	2.32	-	-	3.75
	2	-	4.44	6.67	-
9	3	7.36	-	-	6.39
	0	-	-	1.39	-
	1	-	-	2.92	-
9	2	-	-	5.00	-
	3	-	-	6.39	-

BEANS			
Strip	O	H	Mean
GRAIN: CWT			
1	18.0	17.2	17.6
2	22.1	21.0	21.6
4	23.7	12.8	18.2
5	23.9	12.4	18.2
6	22.8	14.3	18.5
7	21.7	10.9	16.3
8	19.2	6.5	12.8
Mean	21.6	13.6	17.6
STRAW: CWT			
1	9.8	7.6	8.7
2	9.9	10.4	10.2
4	11.1	6.2	8.7
5	10.7	4.1	7.4
6	9.3	5.2	7.3
7	8.8	4.8	6.8
8	6.5	2.1	4.3
Mean	9.5	5.8	7.6

Mean D.M. %: Grain: 82.8
 Straw: 73.0