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Yields of the Field Experiments 1964

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64/W/WIR/B/6 Irrigation

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64/B/6.1

IRRIGATION EXPERIMENT

(WIR)

Revised 1963

The effects of irrigation and nitrogen - Woburn Butt Close 1964, the 14th year.

For details of previous cropping, treatments etc., see 'Details' 1962.

Sugar beet: The test of early v normal singling was omitted.

Barley: The variety is now Maris Badger.

Clover: The variety is now Dorset Marl double cut red clover.

Lucerne: Plots 73 - 80 failed and were rotary cultivated in mid-season. In view of the incomplete replication remaining no yields are presented.

Area harvested: Sugar beet, sub plot - 0.0102, barley, whole plot - 0.0097, clover, whole plot - 0.0058, lucerne, sub plot - 0.0162.

RAINFALL AND IRRIGATION: INCHES

Week ending	Rain-fall	Barley C	Sugar beet			Clover			Lucerne		
			A	B	C	A	B	C	A	B	C
May 4	0.77										
11	0.09										
18	0.12	0.50				0.50		0.50			
25	0.44					0.50		0.50	0.50		0.50
June 1	0.25	0.50	0.50		0.50						
8	1.51										
15	0.66										
22	1.28										
29	-										
July 6	-	0.50	0.50		0.50	0.50	0.50		0.50	0.50	
13	0.55	0.50	0.50		0.50	0.50	0.50		0.50	0.50	
20	0.33				0.50	0.50	0.50				
27	0.09										0.50
Aug 3	0.01			1.50	0.50						
10	0.50										
17	0.12					0.50	0.50				
24	0.16			0.50	1.00	0.50	0.50				1.00
31	0.03					0.50	0.50				
Sept 7	0.10										
14	0.01										
21	0.37										
28	0.62										
Oct 5	-										
Total	8.01	2.00	1.50	2.00	3.50	1.00	3.00	4.00	10.50	1.00	3.00

64/B/6.2

Cultivations, etc.:

Sugar beet. Subsoiled: Sept 11, 1963. Ploughed twice: Aug 20 and Jan 2, 1964. Salt applied: Feb 4. Basal compound and sulphate of ammonia applied: Apr 7. Seed drilled at 5lb: Apr 10. Singled, sprayed with DDT at 0.63 lb in 40 gals: May 21. Lifted: Oct 13.

Barley: Ground chalk applied at 44 cwt: Dec 20, 1963. Ploughed: Jan 3, 1964. Basal compound and 'Nitro-Chalk' applied, seed drilled at 2.5 bushels: Feb 14. Clover sown at 30 lb: Apr 27. Sprayed with MCPB/MCPA (New Legumex at 5 pints in 40 gals): May 21. Combine harvested: Aug 21.

Clover: Seed undersown in barley at 30 lb: Apr 18, 1963. Basal compound fertiliser applied: Feb 5, 1964. Cut 3 times: June 11, July 27, Sept 29.

Lucerne: Sprayed with paraquat at 1.6 lb ion in 40 gals: Feb 10, 1964. 'Nitro-Chalk', muriate of potash and basal P applied: Apr 3. Plots 73 - 80 cut (no yields taken) and rotary cultivated twice: May 15 and 27. Cut 4 times: June 9, July 16, Sept 2, Oct 30. Muriate of potash applied after first 3 cuts.

Standard errors per plot.

Sugar beet. Roots,	Whole plot: 1.421 or 8.6% (6 d.f.)
	Sub plot: 1.592 or 9.7% (8 d.f.)
Total sugar,	Whole plot: 6.33 or 9.8% (6 d.f.)
	Sub plot: 6.39 or 9.9% (8 d.f.)
Tops,	Whole plot: 1.738 or 19.4% (6 d.f.)
	Sub plot: 1.364 or 15.3% (8 d.f.)
Barley. Grain,	Whole plot: 5.15 or 15.3% (5 d.f.)
	Sub plot: 2.57 or 7.6% (10 d.f.)
Clover. Dry matter,	
1st cut.	Whole plot: 2.24 or 7.5% (6 d.f.)
	Sub plot: 2.71 or 9.0% (8 d.f.)
2nd cut.	Whole plot: 2.51 or 11.5% (6 d.f.)
	Sub plot: 2.50 or 11.4% (8 d.f.)
3rd cut.	Whole plot: 0.86 or 12.0% (6 d.f.)
	Sub plot: 0.55 or 7.7% (8 d.f.)
Total of 3 cuts.	Whole plot: 4.29 or 7.3% (6 d.f.)
	Sub plot: 4.81 or 8.1% (8 d.f.)

64/B/6.3

SUMMARY OF RESULTS

SUGAR BEET

	O	A	B	C	Mean
ROOTS					
	(1) and (2)				(± 0.460)
N1	13.41	13.34	17.48	16.60	15.20
N2	13.75	16.77	19.91	20.17	17.65
Mean (± 0.820)	13.58	15.05	18.69	18.39	16.43
SUGAR %					
N1	20.1	20.1	19.6	19.9	19.9
N2	18.6	19.3	19.3	19.6	19.2
Mean	19.4	19.7	19.5	19.8	19.6

(1) (± 0.919) For use in vertical and interaction comparisons only(2) (± 1.047) For use in horizontal and diagonal comparisons only

64/B/6.4

SUGAR BEET

	O	A	B	C	Mean
TOTAL SUGAR					
		(1) and (2)			(± 1.84)
N1	54.0	53.5	68.5	66.1	60.5
N2	51.5	64.7	76.9	79.4	68.1
Mean (± 3.66)	52.8	59.1	72.7	72.7	64.3

TOPS

		(1) and (2)			(± 0.394)
N1	5.91	7.09	8.05	7.87	7.23
N2	7.22	9.54	11.94	13.91	10.65
Mean (± 1.004)	6.56	8.31	10.00	10.89	8.94

Total sugar Tops

- (1) (± 3.69) (± 0.787) For use in vertical and interaction comparisons only
- (2) (± 4.49) (± 1.148) For use in horizontal and diagonal comparisons only

64/B/6.5

BARLEY

GRAIN

	O	C	Mean
	(1) and (2)		(±0.74)
N1	28.8	31.0	29.9
N2	37.4	37.6	37.5
Mean (±2.10)	33.1	34.3	33.7

- (1) (±1.05) For use in vertical and interaction comparisons only
 (2) (±2.23) For use in horizontal and diagonal comparisons only

Mean D.M.%: 83.5

64/B/6.6

CLOVER
DRY MATTER

	O	A	B	C	Mean
1ST CUT*					
	(1) and (2)				(± 0.78)
N1	29.8	30.9	28.6	33.2	30.6
N2	27.3	28.0	27.0	34.9	29.3
Mean (± 1.29)	28.5	29.5	27.8	34.0	30.0

Mean D.M. %: 17.1

2ND CUT					
	(1) and (2)				(± 0.72)
N1	17.1	17.5	28.7	23.6	21.7
N2	18.6	15.1	29.0	25.4	22.0
Mean (± 1.45)	17.8	16.3	28.9	24.5	21.9

Mean D.M. %: 18.6

1ST CUT 2ND CUT

- (1) (± 1.57) (± 1.44) For use in vertical and interaction comparisons only
- (2) (± 1.70) (± 1.77) For use in horizontal and diagonal comparisons only

*NOTE: 1st cut O = B
 A = C

64/B/6.7

CLOVER					
DRY MATTER					
	O	A	B	C	Mean
3RD CUT					
	(1) and (2)				(± 0.16)
N1	2.2	3.2	11.9	11.7	7.2
N2	2.4	4.6	10.3	11.6	7.2
Mean (± 0.50)	2.3	3.9	11.1	11.6	7.2

Mean D.M. %: 24.1

TOTAL OF 3 CUTS					
	(1) and (2)				(± 1.39)
N1	49.1	51.6	69.2	68.5	59.6
N2	48.3	47.7	66.3	71.9	58.5
Mean (± 2.48)	48.7	49.7	67.7	70.2	59.1

Mean D.M. %: 19.9

3RD CUT TOTAL OF
3 CUTS

- (1) (± 0.32) (± 2.78) For use in vertical and interaction comparisons only
- (2) (± 0.55) (± 3.16) For use in horizontal and diagonal comparisons only