

## FIELD EXPERIMENTS 1967.

Serial No. 23 V

Stat. File C 1

CROP: Potatoes.

Field Hobarts Close.

VARIETY: King Edward.

Scotch seed  $1\frac{1}{4}$ " - 2".

EXPERIMENT: Irregularity of Planting.

## TREATMENTS AND LAYOUT:

5 fully randomised blocks.

All combinations of

- |  |       |      |     |
|--|-------|------|-----|
| 1. Regularity. Coefficient of variation: | (i)   | 0    |     |
|  | (ii)  | 20%  |     |
|  | (iii) | 40%  |     |
| 2. Seed spacing (i)                      | 8"    | (iv) | 60% |
|  | (ii)  | 12"  |     |
|  | (iii) | 16"  |     |

Plot Size: Treatment: 3 rows x 30 ins x 80 ft.

Harvest: 1 row x 80 ft.

Manuring with dates of:

9 owt 13.13.20 )  
5 owt Kieserite) in the seedbed.

Date of

Plantings:- 4 May. Hand planting to strings. Ridges subsequently split.

Inter row cultivations and re-ridging: 8 May.

Emergence counts: 19 June.

Blight spraying: 1. 17th July.  $1\frac{1}{2}$  lbs Dithane/acre  
2. 28th July.  $1\frac{1}{2}$  lbs Dithane/acre  
3. 7 August.  $1\frac{1}{2}$  lbs Fennite A/acre + 6 fl oss  
Metasystox for aphids.

Top Removal: 18th September. Sulphuric acid.

Lifting: 4 October.

Remark: Previous croppings: 1969: W. Wheat  
1968: W. Wheat

Blocks planted with following grades of seed:

I	$1\frac{1}{2}$ - 2"
II	$1\frac{1}{4}$ - $1\frac{3}{4}$ "
III	> $1\frac{3}{4}$ "
IV	< $1\frac{1}{4}$ "
V	$1\frac{1}{8}$ - $1\frac{3}{8}$ "

Due to inaccuracies in splitting the ridges some tubers were displaced from the centre of the rows. A score was thus necessary for position of plants in the ridge.

Irregularity of Planting1. King EdwardEmergence count (\*000 plants/acre)

Regularity	Spacing (ins)			Means
	8	12	16	
0%	21.7	13.8	10.9	15.5
20%	18.8	14.5	11.9	15.1
40%	19.2	12.1	10.5	13.9
60%	18.5	12.1	9.8	13.5
Means	19.5	13.1	10.8	

Score for Position in Ridge (1 = good  
5 = poor)

Regularity	Spacing (ins)			Means ( $\pm 0.31$ )
	8	12	16	
		( $\pm 0.55$ )		
0%	2.8	3.0	3.8	3.2
20%	3.6	3.4	3.4	3.5
40%	3.6	4.4	4.6	4.2
60%	3.0	3.6	4.4	3.7
Means ( $\pm 0.27$ )	3.3	3.6	4.1	

S.E. per plot =  $\pm 1.22$  or 33.56%Total yield (tons/acre)

Regularity	Spacing (ins)			Means ( $\pm 0.643$ )
	8	12	16	
		( $\pm 1.114$ )		
0%	7.91	7.24	6.33	7.16
20%	7.18	6.74	7.61	7.17
40%	7.77	5.47	6.74	6.66
60%	7.44	7.34	6.65	7.14
Means ( $\pm 0.557$ )	7.58	6.70	6.83	

S.E. per plot = 2.491 or 35.40%

Total yield (tons/acre) adjusted for Position Score

Regularity	Spacing (ins)			Means ( $\pm 0.472$ )
	8	12	16	
		( $\pm 0.818$ )		
0%	6.74	6.35	6.57	6.56
20%	7.13	6.41	7.28	6.94
40%	7.72	6.55	8.10	7.46
60%	6.55	7.29	7.72	7.19
Means ( $\pm 0.409$ )	7.04	6.65	7.42	

S.E. per plot = 1.829 or 25.99%

b = 1.4048. S.E. b =  $\pm 0.2261$

Irregularity of Planting, L. King Edward

Yields (tons/acre) and as % total yield

TREATMENT	1 1/2"	1 1/2" - 2 1/2"	2 1/2" - 3"	3"	More > 3"
Regularity					
Spacing					
8	1.66 (20.9)	3.05 (38.2)	1.60 (20.0)	1.46 (18.8)	0.15 (2.0)
12	1.39 (20.1)	2.57 (32.8)	1.75 (23.4)	1.46 (22.8)	0.08 (0.9)
16	0.84 (12.6)	1.93 (30.5)	1.56 (25.2)	1.86 (29.0)	0.15 (2.8)
20%					
8	1.55 (20.4)	2.52 (33.1)	1.77 (26.2)	1.28 (19.2)	0.06 (1.1)
12	1.24 (18.3)	2.43 (36.0)	1.58 (22.7)	1.38 (21.1)	0.12 (1.9)
16	1.13 (15.0)	2.32 (30.6)	1.98 (25.6)	2.11 (27.8)	0.07 (7.0)
40%					
8	1.81 (24.9)	3.03 (37.4)	1.86 (24.3)	1.03 (13.0)	0.03 (0.4)
12	0.74 (13.3)	1.76 (30.9)	1.43 (26.8)	1.39 (26.0)	0.15 (3.0)
16	0.88 (13.0)	1.84 (27.6)	1.62 (23.5)	2.20 (33.1)	0.19 (2.8)
60%					
8	1.48 (19.5)	2.78 (36.2)	1.65 (20.6)	1.42 (22.1)	0.11 (1.6)
12	1.12 (14.9)	2.33 (31.0)	1.98 (27.3)	1.83 (25.8)	0.08 (1.0)
16	0.86 (13.2)	1.96 (28.9)	1.52 (23.5)	2.13 (32.0)	0.17 (2.4)
S.E. per plot ±	0.516 (3.34)	1.052 (5.45)	0.697 (4.80)	0.634 (6.93)	- -
S.E. as % G.M.	42.15% (19.46%)	44.24% (16.64%)	41.18% (19.92%)	38.90% (28.62%)	- -
					6.85 (79.1)
					5.86 (79.9)
					5.50 (87.4)
					5.63 (79.6)
					5.50 (81.7)
					6.48 (85.0)
					5.94 (75.1)
					4.73 (86.7)
					5.86 (87.0)
					5.97 (80.5)
					6.22 (85.1)
					5.79 (86.8)
					2.054 (3.34)
					35.35% (4.04%)