

OKLAHOMA
AGRICULTURAL AND MECHANICAL COLLEGE
SCHOOL OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

STILLWATER

April 9, 1936

Mr. W. G. Cochran
Rothamsted Experimental Station
Harpenden, Herts
England

Dear Mr. Cochran:

Enclosed you will find a copy of the tables which appear in the paper by James W. Day, "The relation of size, shape, and number of replications of plats to probable error in field experimentation," Journal of American Society of Agronomy, (1920), 12, 100-5.

We did not know of any publication to which we might refer you except the Journal, from which these tables were typed.

Yours very truly,

(Miss) Freda Thurman
Secretary of the
Agronomy Department

Enc.

Table I. Data obtained on relation of size of plat to variation in yield.

Size of plat	Standard deviation	Coefficient of variability	Size of plat	Standard deviation	Coefficient of variability
3 adjacent 155-ft. rows	5,885.40	14.19	5 adjacent 50-ft. rows	3,227.66	14.49
5 adjacent 155-ft. rows	9,022.00	13.07	10 adjacent 50-ft. rows	5,443.76	12.13
10 adjacent 155-ft. rows	13,018.31	9.43	15 adjacent 50-ft. rows	6,802.67	10.18
20 adjacent 155-ft. rows	19,405.81	7.03	20 adjacent 50-ft. rows	7,417.98	8.32
1 5-ft. row	164.84	37.20	30 adjacent 50-ft. rows	7,295.68	5.46
1 10-ft. row	262.89	29.58	50 adjacent 50-ft. rows	15,135.71	6.79
1 15-ft. row	354.07	26.52	3 adjacent 15-ft. rows	749.30	18.68
1 20-ft. row	434.67	24.41	5 adjacent 15-ft. rows	1,101.14	16.49
1 25-ft. row	518.07	22.81	10 adjacent 15-ft. rows	1,694.70	12.72
1 30-ft. row	602.27	22.53	20 adjacent 15-ft. rows	2,659.38	9.98
1 35-ft. row	661.48	21.32	50 adjacent 15-ft. rows	4,960.03	7.45
1 40-ft. row	728.73	20.28	100 adjacent 15-ft. rows	3,688.95	2.77
1 45-ft. row	796.60	19.85	100 adjacent 30-ft. rows	6,326.87	2.38
1 50-ft. row	922.68	20.67	8 adjacent 5-ft. rows	595.02	16.77
1 60-ft. row	1,021.62	18.99	16 adjacent 5-ft. rows	869.78	12.36
1 75-ft. row	1,309.56	19.64	24 adjacent 5-ft. rows	1,120.85	10.54
1 100-ft. row	1,502.29	16.74	32 adjacent 5-ft. rows	1,238.05	8.74
1 125-ft. row	1,912.73	17.01	64 adjacent 5-ft. rows	1,599.08	5.66
1 150-ft. row	2,333.92	17.36	96 adjacent 5-ft. rows	1,786.46	4.20
3 adjacent 50-ft. rows	2,186.24	16.37	100 adjacent 5-ft. rows	1,787.98	4.02

Table 2. Data on relation of shape of plat to variation in yield.

Units of which plat is composed.		Length of rows in plat.	Shape of plat.	Standard deviation.	Coefficient of variability
No. of adjacent rows.	Length of rows.				
1	Feet. 150	Feet. 150	Long in direction of least variation	2,333.92	17.36
3	50	150	do.	2,186.24	16.37
10	15	150	Rectangular	1,694.70	12.72
24	5	120	Long in direction of most variation	1,120.85	10.54
5	155	775	Long in direction of least variation	9,022.00	13.07
15	50	750	do.	6,802.67	10.18
50	15	750	Long in direction of most variation	2,960.03	7.45
100	5	500	do.	1,787.98	4.02
10	155	1,550	Long in direction of least variation	13,018.31	9.43
30	50	1,500	Somewhat long in direction of least variation	7,295.68	5.46
100	15	1,500	Long in direction of most variation	3,688.95	2.77
3	155	465	Long in direction of least variation	5,885.40	14.19
20	15	300	Square	2,659.38	9.98
1	50	50	Long in direction of least variation	922.68	20.76
3	15	45	do.	749.30	18.68
8	5	40	Square	595.02	16.76
5	50	250	Long in direction of least variation	3,227.66	14.49
10	15	150	do.	1,604.70	19.72

Table 3. Data on relation of replication of plats to variation in yield.

Composition of row unit.		Standard deviation.	Coefficient of variability.	Composition of block unit			Standard deviation.	Coefficient of variability.
No. of rows.	Length of rows.			No. of blocks.	No. of adjacent rows.	Length of rows.		
	Feet.					Feet.		
3	155	3,972.75	958	5	3	50	2,654.38	3.97
5	155	3,663.36	5.31	10	3	50	4,481.34	3.35
10	155	5,992.95	4.34	14	3	50	6,549.04	3.50
15	155	5,820.50	2.81	5	5	50	3,277.14	2.94
20	155	7,835.50	2.84	10	5	50	5,309.54	2.38
3	50	1,590.41	11.86	7	5	15	2,343.53	5.04
5	50	1,657.22	7.43	14	5	15	3,087.07	3.32
10	50	2,651.13	5.95	28	5	15	3,395.89	1.83
15	50	2,934.72	4.39	3	10	15	2,385.96	5.97
20	50	3,939.99	4.42	7	10	15	3,486.28	3.75
30	50	4,550.91	3.40	14	10	15	3,080.94	1.66
60	50	5,497.99	2.06	3	20	15	3,584.34	4.51
3	15	539.03	13.43	6	20	15	2,016.34	1.27
6	15	923.25	11.52	3	50	15	10,566.53	5.29
12	15	1,217.31	7.59	5	8	5	1,334.90	7.53
18	15	1,542.75	6.42	10	8	5	1,541.28	4.35
26	15	1,428.38	3.97	52	8	5	2,077.35	1.13
52	15	2,197.54	3.05	5	16	5	1,530.27	4.32
78	15	3,177.47	2.89	7	16	5	1,936.41	3.90
104	15	3,383.64	2.35	9	16	5	2,132.85	3.34
156	15	3,984.77	1.85	14	16	5	2,857.67	2.88
				18	16	5	3,123.77	2.45
				36	16	5	1,679.44	0.66
				5	100	5	4,456.79	2.00
				5	3	155	10,183.75	4.92