MACDONALD COLLEGE

(McGILL UNIVERSITY)

Mr. W. G. Cochran,
Statistical Department,
Rothamsted Experimental Station,
Harpenden, Herts,
ENGLAND.

January 19th, 1938.

Dear Mr. Cochran,-

I have your letter of January 5th, with reference to the data used for my paper on,- "Replication in Relation to Accuracy in Comparative Crop Tests", appearing in the Journal of the American Society of Agronomy, Vol. 15, No.5, May, 1923.

I am sending you a copy of the yields which we used in connection with this paper.

With regard to your postscript, enquiring as to the size of plot,- a part of the wheat range was harvested as single row plots, and the remaining part was harvested in plots 5 x 32 links. In oats the smallest size of plot was 5 x 32 links, although the whole range was not harvested in this manner.

The method of harvesting may be explained as follows,- The usual practice of laying out plots at the time that this experiment was carried on was to mark off the land into 1/40 acre plots 25 x 100 links and to leave an alleyway of 5 links between these. Such plots were sometimes sub-divided in the middle by another alley of 5 links, making 1/100 acre plots 10 x 100 links. In making my study in this experiment these 1/40 acre and 1/100 acre plots were again sub-divided by taking out a little strip running across the plots lengthwise of the ranges. The plots 5 x 32 links really represented what would have been alleyways in a regular experiment. I thought it advisable to get rid of the border effect which would have occurred and I used the material grown thereon just to study this particular size of plot. I think this is fairly well illustrated in the diagram appearing on page 193 of the paper.

I trust that this gives you the information which you desire.

Yours very truly,

R. Summerby

R. Summerby,
Professor of Agronomy.

rs.m

ALASKA OATS – RANGE VIII, NORTH WEST FIELD, 1921

Data used for Paper on Replication in Relation to Accuracy in
Comparative Crop Tests

Yields in Grams per plot

Series 1			Series 2			Series 3		
5 x 32	10 x 32	25 x 32	5 x 32	10 x 32	25 x 32	5 x 32	10 x 32	25 x 32
	819			1101			1311	
596			972			958		
	1043	2458		1814	3887		1707	3976
638			805			978		
	1467			1622			1744	
774			906			871		
	1434	3675		1880	4408		1446	4061
790			885			690		
	1688			1494			1389	
714			793			661		
	1465	3867		1693	3980		1304	3354
782			742			491		
	1516			1358			1379	
780			915			699		
	1506	3802		1592	3865		1259	3337
828			898			637		
	1879			1774			1247	
758			759			659		
	1533	4170		1472	4005		1257	3163
833			836			740		
	1805			1616			1368	
910			877			805		
	1843	4558		1641	4134		1500	3673
821			805			893		
	1810			1660			1772	
1010			934			900		
	2061	4881		1813	4407		1498	4170
995			1024			787		
	1757			1778			1390	
866			870			811		
	1456	4079		1846	4494		1611	3812
710			890			833		
	1375			1745			1270	
709			873			792		
	1722	3806		1759	4377		1521	3583

Series 1 (Cont'd.)			Series 2 (Cont'd.)			Series 3 (Cont'd.)		
5 x 32	10 x 32	25 x 32	5 x 32	10 x 32	25 x 32	5 x 32	10 x 32	25 x 32
1041			1002			646		
960	1855		993	2117		731	1330	
942	1677	4492	963	1858	4968	763	1190	3251
952	1779		1034	1966		924	1640	
	1741	4472		1670	4670		1316	3880
777	1760		702	1482		671	1413	
819	1655	4234	905	1666	4053	794	1428	3635
817	1596		826	1672		746	1502	
799	1566	3961	945	1698	4315	765	1335	3602
832	1682		941	1844		837	1258	
901	1622	4205	1088	1807	4739	754	1509	3521
789	1684		923	1468		770	1436	
869	1390	3943	892	1690	4050	627	1204	3267
755	1599		782	1622		727	1357	
838	1526	3963	782	1704	4108	714	1440	3511
758	1350		981	1402		778	1137	
698	1233	3981	771	1403	3576	632	982	2751

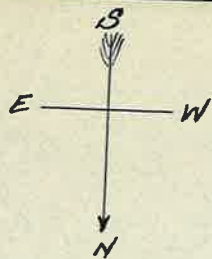| Series 1 (Cont'd.)			Series 2 (Cont'd.)			Series 3 (Cont'd.)		
5 x 32	10 x 32	25 x 32	5 x 32	10 x 32	25 x 32	5 x 32	10 x 32	25 x 32

HURON WHEAT - RANGE 4, NORTH WEST FIELD, 1921.

Data used for Paper on Replication in Relation to Accuracy
in Comparative Crop Tests.

Yield in Grams : Size of plots - 1 x 32 links

Row No.	Series 1	2	3	Row No.	Series 1	2	3
6	189	156	160	49	175	172	153
7	181	161	182	50	154	137	135
8	189	172	163	51	183	164	150
9	171	181	182	52	172	150	131
10	200	174	155	53	191	151	149
11	185	185	146	54	191	171	144
12	187	173	157	55	174	148	150
13	179	169	175	56	207	159	151
14	190	186	154	57	179	151	152
15	177	187	173	58	180	150	142
16	170	157	150	59	174	163	164
17	168	168	144	60	191	166	160
18	185	190	160	61	177	166	151
19	184	173	172	62	184	177	151
20	176	149	132	63	180	187	158
21	189	182	163	64	203	177	149
22	161	178	165	65	179	186	160
23	177	149	109	66	171	155	157
24	145	121	133	67	176	181	160
25	150	144	162	68	182	172	166
26	165	179	140	69	178	165	147
27	158	158	160	70	191	162	153
28	166	160	138	71	163	177	152
29	163	122	198	72	163	143	137
30	171	149	139	73	149	154	150
31	181	133	171	74	173	167	172
32	165	151	165	75	156	153	177
33	157	172	156	76	173	163	174
34	194	210	176	77	144	148	141
35	167	141	163	78	184	179	148
36	178	150	178	79	138	143	146
37	165	150	152	80	162	165	151
38	188	154	179	81	160	160	167
39	185	131	188	82	175	175	164
40	193	158	145	83	152	167	182
41	190	173	177	84	168	172	159
42	192	154	205	85	151	163	181
43	172	170	165	86	155	143	161
44	190	170	165	87	148	168	162
45	176	152	182	88	161	189	189
46	184	147	132	89	142	167	176
47	175	161	149	90	150	134	155
48	172	166	145	91	129	162	170

Row No.	Series (Cont'd) 1	2	3	Row No.	Series (Cont'd.) 1	2	3
92	143	139	167	144	145	165	146
93	149	151	150	145	143	141	139
94	142	157	175	146	143	172	140
95	147	133	137	147	163	163	170
96	138	150	138	148	146	145	131
97	142	153	145	149	131	138	132
98	134	135	158	150	159	159	131
99	150	154	135	151	151	154	157
100	158	182	147	152	158	138	132
101	191	157	134	153	150	132	184
102	176	154	137	154	151	129	136
103	180	165	156	155	154	140	152
104	173	172	140	156	146	147	163
105	188	146	122	157	148	161	169
106	213	171	158	158	159	142	151
107	188	159	167	159	135	165	174
108	186	152	124	160	152	143	139
109	216	157	161	161	145	163	178
110	172	150	139	162	170	160	144
111	183	159	156	163	158	144	118
112	172	161	147	164	160	182	177
113	181	175	136	165	153	166	133
114	181	155	132	166	188	176	166
115	145	150	137	167	171	140	160
116	170	171	146	168	166	173	156
117	153	161	142	169	160	163	138
118	163	189	153	170	180	159	173
119	152	174	171	171	170	142	167
120	141	181	159	172	182	138	150
121	107	144	149	173	175	151	163
122	163	199	182	174	173	137	141
123	146	178	153	175	181	148	159
124	156	180	150	176	139	122	164
125	130	177	166	177	154	137	145
126	130	180	142	178	145	126	182
127	150	206	149	179	160	142	156
128	143	197	146	180	150	137	166
129	140	207	180	181	168	124	173
130	162	193	173	182	149	143	149
131	148	182	164	183	181	169	163
132	160	185	136	184	170	149	148
133	134	152	148	185	153	148	157
134	167	184	153	186	126	134	170
135	161	179	167	187	179	154	175
136	153	152	138	188	164	149	145
137	144	142	149	189	163	164	174
138	170	177	133	190	162	146	144
139	155	168	153	191	159	151	174
140	159	141	120	192	165	162	155
141	178	178	171	193	145	186	143
142	146	180	137	194	171	164	152
143	140	144	131	195	167	171	143
				196	136	149	164
				197	145	156	172

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Yield of Huron Wheat Plots' 1921.

Range IV N.W.F.

Series 1.	Series 2.	Series 3.	Total.
32 X 10 links.	32 X 10 links.	32 X 10 links.	96 X 10 links.
1831 gms.	1671 gms.	1724 gms	5226 gms.
1705	1611	1490	4806
1773	1550	1673	4996
1771	1567	1438	4776
1821	1728	1552	5101
1607	1635	1613	4855
1432	1516	1522	4470
1837	1589	1457	4883
1427	1861	1590	4878
1533	1588	1417	4538
1504	1451	1557	4512
1746	1527	1573	4846
1615	1480	1598	4693
1637	1570	1708	4915
1528	1677	1537	4742
1561	1537	1519	4617
1450	1533	1541	4524
1368	1582	1496	4446
1486	1574	1906	4966
1504	1673	1964	5141
1682	1813	2095	5590
1665	1894	2219	5778
1727	1884	1885	5496
1573	1915	1880	5368
1545	1709	2103	5357
1354	1680	2002	5036
1547	1620	1890	5063
1673	2037	1762	5472
1692	1808	1638	5138
1761	1210	1749	4720
1716	1846	1766	5328
1735	1963	1753	5451
2045	1730	1779	5554
2225	1735	1520	5480