Spring Grain Nursery

The spring grain nursery was seeded May 1, 1968 for wheat, and May 2, 1968 for barley and oats. Apparently, the dry subsoil was not properly taken into account in the irrigation program, because the nursery suffered from a shortage of water for a time early in June. This shortage decreased the yield in general and created a variability centered around the sprinkler heads, where the crop received more adequate irrigation. The irrigation lines did not run through the harvested area. However, the spots extended into the harvest area. This irregularity in yield and growth is reflected in the high coefficient of variation in the spring wheat especially, and to a lesser extent in the barley and oats.

The yields reflect the late planting dates (Tables No. 20, 21, and 22). In the case of barley, it is generally accepted that Trebi will perform better than Hannchen in early plantings and will yield less seeded late.

The wheat yields (Table No. 20) show the same trend, with Federation yielding much more poorly than would be expected by an early seeding. The Mexican variety, Pitic 62, should not have been affected by planting date, and did not head out for several days beyond July 6. The kernels at harvest were small and poorly filled, indicating that the variety was immature at harvest. It may be that these varieties will have to be seeded early in order to allow them to develop their potential in this area.

Cayuse oats (Table No. 22) is high yielding again this year, and considerably higher yielding than Park or Victory, the two locally available varieties.

The yields by replicate for spring wheat, oats and barley are shown in Appendix Tables No. 33, 34, and 35.

Table No. 20

Average Yield and Bushel Weight for the Spring Wheat Varieties and Lines
Grown by the Central Oregon Experiment Station at the Redmond Location - 1968

Variety or Line	Pedigree	Bushel Weight	Average Yield #/Acre	Multiple Range Significance 5%	Average Yield Bu./Acre	Heading Date	Plant Height
Burt x KF	13641	59.5	2955		49.25	7/6	33.8
Burt x Onas 52 Sel 466	WN 4468	58.5	2928		48.80	7/6	27.4
Lemhi	11415	59.5	2742		45.70	7/1	30.4
Onas 52 x Idaed Sel 18-1	13721	58.0	2678		44.63	7/5	26.4
Lee x No. 58 Tc, A61195-46	13979	58.0	2610		43.50	6/29	27.4
64 Ab 9405	13977	58.0	2578		42.93	7/3	22.0
Idaed 59	13631	59.5	2382		39.70	6/29	26.0
Idaed x Burt Sel. 42-5		58.5	2372		39.53	7/3	25.6
Idaed x Burt Sel. 48-2		61.0	2353		39.22	6/29	26.8
Lemhi 62 x C.I. 13636-1269	13981	60.0	2300		38.33	7/1	26.8
Burt x KF (58-2025)	13736	56.5	1982		33.03	7/5	25.6
Federation 67	13732	59.5	1979		32.98	6/29	27.6
Eureka - Lemhi x $Idaed^3$ 1300	13980	58.0	1936		32.27	7/1	25.6
Lemhi 62 x $Idaed^2$ 1264	13682	58.0	1875		31.25	6/29	27.2
Lemhi 66	13969	55.5	1749		29.15	7/2	26.8
Premier Fr^2 x $Idaed^5$ 1301	13984	58.5	1703		28.38	6/30	26.0
Premier Fr^2 x $Idaed^5$ 1277	13983	57.5	1686		28.10	6/30	25.6
Moran	13743	57.5	1672		27.88	7/5	27.6
Federation	4734	55.0	1490		24.83	7/3	24.0
Pitic 62		56.5	1358		22.63		23.6
L.S.D. @ 5%			744				
@ 1%			987				
C.V. %			27.3				
Seeded May 1, 1968							

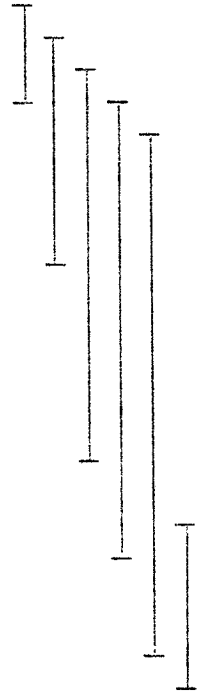
Table No. 21

Average Yield and Agronomic Data Taken for the Spring Barley Varieties and Lines Grown by the Central Oregon Experiment Station at the Redmond Location - 1968

Variety or Line	Pedigree	Bushel Wt.	Average Yield #/Acre	Multiple Range Significance 5%	Average Yield Bu./Acre	Plant Height	Heading Date
Hannchen	531	48.5	3293		68.60	26.4	7/4
Firlbecks III	10088	49.0	3268		68.08	26.8	7/3
CC 5461 x Mt. 59745	13330	43.0	3122		65.04	26.2	7/3
51 Ab 5348	10526	44.5	2976		62.00	25.0	6/28
Vale	10117	42.0	2931		61.06	26.0	7/2
Unitan	10421	45.5	2782		57.96	26.6	6/27
Trebi	936	46.0	2662		55.46	23.6	6/27
Galt	11770	43.8	2647		55.14	25.4	6/27
Gem x Trail[3]	13329	48.8	2296		47.83	26.8	6/28
63 Ab 2867	13327	48.0	2135		44.48	27.0	6/29
Glacier x Mars Mt. 58635	13101	40.0	2103		43.81	26.8	6/25
63 Ab 2986	13328	46.5	1903		39.64	26.8	7/1
Steveland	13100	42.3	1842		38.37	22.0	6/25
Dickson	10968	48.3	1766		36.79	25.2	7/4
Glacier x Manchuria	11346	44.0	1514		31.54	28.6	6/27
L.S.D. @ 5%			600.4				
@ 1%			799.1				
C.V. %			19.1				
Seeded May 2, 1968							

Table No. 22

Average Yield and Agronomic Data Taken for the Spring Oat Varieties and Lines Grown by the Central Oregon Experiment Station at the Redmond Location - 1968

Variety or Line	Pedigree	Bushel Weight	Average Yield #/Acre	Multiple Range Significance 5%	Average Yield Bu./Acre	Heading Date(1)	Plant Height
Cayuse	8263	34.8	2458		76.81	7/4	27.0
Zanster	7476	35.0	2294		71.69	7/3	30.4
47 Ab 2685 (Bond x Anth^2 x Over.)	7960	34.3	2225		69.53	7/4	30.8
Lodi	7561	33.3	1988		62.13	-	33.8
Minn II-22-220	2874	31.8	1893		59.16		28.2
Sioux	8172	33.0	1867		58.34	-	32.6
Au Sable	7670	31.5	1836		57.38	-	30.0
58 Ab 2781	7572	30.0	1823		56.97	-	31.2
Bea. x Ga. 2 x Clint. 3 x Clintland 4 x C.I. 5093	7815	36.5	1820		56.88	-	31.0
58 Ab 2777	7591	31.5	1798		56.19	-	31.4
Park	6611	36.0	1740		54.38	-	32.8
Garry^3 x Clinton 2 x Boone x Cartier	7982	34.3	1738		54.31	7/4	31.4
Bingham	7588	33.0	1681		52.53		32.8
Basin	5346	33.3	1642		51.31	-	33.2
Victory	1145	33.8	1624		50.75	-	38.0
Stormont	8170	31.3	1484		46.38	7/3	28.8
Ga. Sel. 4 x Clint. x Vic. 3 x Victoria 2 x Haj. x Bann.	8048	31.8	1463		45.72	7/5	31.4
Orbit	7811	27.5	1176		36.75	7/4	26.4
L.S.D. @ 5%			418.6				
@ 1%			556.2				
C.V. %			18.3				

Seeded May 2, 1968 (1) Heading dates shown indicate early heading

Appendix Table No. 33

Yield by Replicate of the Spring Wheat Varieties or Lines Grown by the Central Oregon Experiment Station at the Redmond Location - 1968

Variety or Line	Pedigree	Yield in Pounds Per Acre					
		Rep. I	Rep. II	Rep. III	Rep. IV	Rep. V	Average
Federation	4734	1772	1184	1960	1176	1360	1490.4
Lemhi	11415	2232	1756	2116	4372	3236	2742.4
Lemhi 66	13969	2116	1776	2240	1600	1012	1748.8
Burt x KF	13641	1556	2884	2684	4284	3368	2955.2
Idaed 59	13631	2056	2096	1736	2852	3168	2381.6
Burt x KF (58-2025)	13736	2008	1712	2248	1676	2264	1981.6
Idaed x Burt Sel 42-5		2952	2136	2000	2828	1944	2372.0
Onas 52 x Idaed Sel 18-1	13721	3060	1152	2840	1988	4352	2678.4
Burt x Onas 52 Sel 466 Wn 4468		3784	2120	3352	2360	3024	2928.0
Idaed x Burt Sel 48-2		2964	2412	2040	2424	1924	2352.8
Moran	13743	1176	1964	1768	1592	1860	1672.0
Premier Fr^2 x $Idaed^5$ 1277	13983	1440	2068	1188	1400	2332	1685.6
Premier Fr^2 x $Idaed^5$ 1301	13984	1592	1856	1772	1576	1720	1703.2
64 Ab 9405	13977	2456	3028	3100	1912	2384	2576.0
Lemhi 62 x $Idaed^2$ 1264	13682	2120	1684	1964	1568	2040	1875.2
Lee x No. 58 Tc, A 61195-46	13979	2616	2520	2128	3948	1840	2610.4
Eureka-Lemhi x $Idaed^3$ 1300	13980	2280	1652	1812	1772	2164	1936.0
Federation 67	13732	2084	1764	2484	1808	1756	1979.2
Lemhi 62 x C.I. 13636-1269	13981	2192	2412	2632	2360	1904	2300.0
Pitic 62		1616	888	1744	1184	1356	1357.6
L.S.D. @ 5%							743.6
@ 1%							986.6
C.V. %							27.3

Seeded May 1, 1968

Appendix Table No. 34

Yield by Replicate for the Spring Barley Varieties and Lines Grown by the Central Oregon Experiment Station at the Redmond Location - 1968

Variety	Yield in Pounds Per Acre					
	Rep. I	Rep. II	Rep. III	Rep. IV	Rep. V	Average
Trebi	2972	3200	1992	2252	2896	2662
Firlbecks III	3200	3944	3600	2832	2764	3268
Unitan	3232	2948	2892	2384	2452	2782
61 Ab 5348	2984	3200	2864	3408	2424	2976
Vale	4040	3436	2684	1936	2560	2931
Glacier x Manchuria	1816	2292	1128	1300	1032	1514
Dickson	2332	1572	1700	1488	1740	1766
Galt	2864	3440	2340	2432	2160	2647
Steveland	2088	2080	1264	2144	1632	1842
Hannchen	3140	3328	2968	3544	3484	3293
Gem x Traill^3	2636	2784	1964	1928	2168	2296
63 Ab 2867	2548	2616	1808	2060	1644	2135
Glacier x Mars Mt. 58035	1624	3032	2096	1896	1868	2103
63 Ab 2986	1112	2596	1788	1600	2420	1903
CC 5461 x Mt. 59745	1680	4008	3584	2340	4000	3122
L.S.D. @ 5%						600.4
1%						799.1
C.V. %						19.1
Seeded May 2, 1968						

Appendix Table No. 35

Average Yield by Replicate for the Spring Oat Varieties and Lines Grown by the Central Oregon Experiment Station at the Redmond Location - 1968

Variety or Line	Pedigree	Yield in Pounds Per Acre					
		Rep. I	Rep. II	Rep. III	Rep. IV	Rep. V	Average
Victory	1145	1084	1984	1908	840	1604	1484
Park	6611	1668	1760	1856	1744	1672	1740
58 Ab 2777	7591	2000	1856	1596	1844	1692	1798
Bingham	7588	2056	1620	1548	1656	1524	1681
Zanster	7476	1820	2244	2820	2500	2088	2294
47 Ab 2685 (Bond x Anth.[2] x Overland)	7960	1852	2052	2464	2608	2148	2225
Orbit	7811	1028	604	1460	1296	1492	1176
Au Sable	7670	1560	2132	1904	1880	1704	1836
Cayuse	8263	1976	2788	2660	2640	2224	2458
Minn. II-22-220	2874	1964	1632	2240	2164	1464	1893
58 Ab 2781	7572	1940	1200	1768	1984	2224	1823
Basin	5346	1952	1540	1500	2040	1180	1642
Sioux	8172	2252	2368	1424	2008	1284	1867
Lodi	7561	1836	2148	2028	1980	1948	1988
Garry[3] x Clinton 2 x Boone x Cartier	7982	1656	1896	1808	1848	1484	1738
Bea. x Garry 2 x Clint. 3 x Clintl. 4 x C.I. 5093	7815	2440	1260	1700	1872	1736	1802
Stormont	8170	1800	1124	1744	1312	1336	1463
Garry Sel. 4 x Clint. x Vic. x Victoria 2 x Haj. x Bann.	8048	2084	1452	1000	1968	1616	1624
L.S.D. @ 5%							418.6
@ 1%							556.2
C.V. %							18.3

Seeded May 2, 1968