

Table S1. Mean values corresponding to 58 orchardgrass families and five commercial cultivars evaluated in 2013 and 2014 at Lewiston and Millville, UT under frequent and infrequent harvest frequencies. Means are across years, location, and harvest frequencies (O) or within locations and across years and harvest frequencies – Lewiston (L) and Millville (P). Traits are maturity (M; 1 – very late to 5 – very early), HDM (H; Mg ha⁻¹), CP (P; g kg⁻¹), IVTD (D; g kg⁻¹), NDFD (F; g kg⁻¹), and WSC (C; g kg⁻¹). Values in the statistically highest grouping for each trait are underlined.

Family	O-M	L-M	P-M	O-H	L-H	P-H	O-P	L-P	P-P	O-D	L-D	P-D	O-F	L-F	P-F	O-C	L-C	P-C
ACKillarney	2.9	2.6	3.2	<u>19.9</u>	<u>26.5</u>	13.4	180	<u>176</u>	183	842	833	851	<u>751</u>	<u>735</u>	770	58	56	60
ACKootenary	2.0	1.8	<u>2.1</u>	15.6	18.3	13.2	<u>190</u>	<u>181</u>	<u>200</u>	<u>848</u>	<u>838</u>	<u>859</u>	<u>748</u>	<u>741</u>	754	55	50	60
Baraula	<u>1.6</u>	1.6	<u>1.6</u>	18.4	23.7	13.3	177	163	192	841	821	<u>861</u>	712	706	717	56	50	62
Intensive	2.1	2.1	<u>2.0</u>	19.1	23.4	<u>14.8</u>	179	166	191	838	819	857	719	714	723	58	49	66
Latar	3.2	2.7	3.8	17.0	24.9	9.1	<u>187</u>	166	<u>208</u>	844	819	<u>869</u>	<u>743</u>	711	774	58	51	65
I3_1	3.6	2.7	4.8	<u>20.2</u>	24.0	<u>17.0</u>	170	173	169	840	827	853	734	733	740	59	56	62
I3_2	3.4	2.2	4.7	<u>20.8</u>	<u>25.4</u>	<u>16.1</u>	177	170	184	842	824	<u>859</u>	727	714	739	58	50	67
I3_3	4.1	2.9	5.2	19.1	<u>25.4</u>	12.8	<u>181</u>	168	<u>195</u>	<u>850</u>	832	<u>869</u>	724	713	736	62	52	72
I5_1	2.4	2.6	<u>2.1</u>	19.3	22.2	<u>16.4</u>	<u>183</u>	174	<u>193</u>	840	829	851	717	700	732	56	51	61
I5_2	2.3	2.1	<u>2.6</u>	19.1	22.6	<u>15.2</u>	179	166	190	838	825	850	719	719	725	53	48	56
I5_3	3.4	3.3	3.6	19.2	23.9	14.3	180	174	188	836	817	854	729	<u>736</u>	721	51	45	57
I5_4	3.5	2.8	4.0	<u>19.7</u>	<u>25.2</u>	14.2	176	162	190	835	819	851	726	704	749	57	60	55
LaS_1	2.8	2.5	2.8	18.8	22.2	<u>15.2</u>	<u>181</u>	171	188	838	820	857	705	688	720	52	40	65
LaS_2	3.1	3.3	3.3	<u>20.7</u>	<u>25.5</u>	<u>15.8</u>	175	166	185	831	815	847	728	724	736	54	50	57
LaS_3	2.6	2.1	3.3	19.4	22.5	<u>16.7</u>	176	166	186	833	818	848	713	714	710	52	48	57
LaS_4	3.9	3.0	4.8	<u>19.9</u>	<u>25.5</u>	14.1	<u>182</u>	174	190	839	826	852	714	708	720	59	53	65
LaS_5	2.5	2.7	<u>2.4</u>	19.2	<u>25.0</u>	13.5	176	166	184	843	827	<u>859</u>	723	710	739	63	56	70
LaS_6	<u>1.5</u>	<u>1.0</u>	<u>2.0</u>	<u>20.4</u>	<u>26.3</u>	14.3	178	168	186	843	824	<u>862</u>	<u>742</u>	717	767	60	51	70
LaS_7	3.3	2.7	4.0	<u>20.4</u>	<u>24.5</u>	<u>17.0</u>	175	169	183	836	825	847	731	735	723	52	49	57
LaS_8	2.2	<u>1.1</u>	2.8	19.3	23.4	<u>15.3</u>	175	162	186	839	819	<u>859</u>	726	722	730	57	48	66
P5_1	<u>1.9</u>	1.7	<u>2.4</u>	18.5	<u>24.5</u>	12.4	179	<u>177</u>	180	<u>848</u>	832	<u>864</u>	737	729	748	66	57	75
P5_10	<u>1.4</u>	<u>0.6</u>	<u>2.2</u>	17.6	21.8	13.4	174	168	181	838	819	857	707	694	721	64	55	71
P5_11	2.6	2.1	2.7	17.5	22.8	12.7	177	164	189	843	826	<u>860</u>	<u>754</u>	<u>751</u>	759	56	52	60
P5_12	<u>1.5</u>	1.1	1.7	17.2	20.7	13.7	<u>184</u>	<u>175</u>	191	<u>849</u>	<u>846</u>	853	<u>747</u>	<u>760</u>	732	56	54	58
P5_13	2.0	1.5	<u>2.6</u>	18.4	23.7	12.8	<u>181</u>	171	191	<u>852</u>	<u>844</u>	<u>860</u>	<u>749</u>	738	760	56	49	63

P5_14	<u>1.9</u>	1.7	<u>2.2</u>	18.3	23.3	13.2	180	166	192	<u>848</u>	834	<u>862</u>	<u>743</u>	728	757	60	51	67
P5_15	<u>1.7</u>	1.9	<u>1.6</u>	18.6	<u>24.4</u>	13.0	<u>182</u>	<u>179</u>	185	<u>850</u>	<u>843</u>	857	719	725	711	64	60	69
P5_16	3.7	2.0	5.1	18.9	<u>27.0</u>	10.5	<u>184</u>	<u>179</u>	192	846	831	<u>861</u>	737	713	758	61	49	72
P5_17	<u>1.5</u>	<u>1.2</u>	<u>1.8</u>	<u>19.7</u>	<u>25.2</u>	13.9	<u>183</u>	166	<u>198</u>	<u>848</u>	<u>838</u>	<u>859</u>	739	729	747	64	58	70
P5_18	<u>1.5</u>	<u>1.1</u>	<u>1.9</u>	17.1	21.7	12.4	177	160	<u>193</u>	845	825	<u>864</u>	733	722	745	63	54	71
P5_19	2.4	<u>1.2</u>	3.6	17.5	23.2	11.8	<u>185</u>	168	<u>201</u>	<u>848</u>	835	<u>862</u>	<u>741</u>	717	769	59	53	65
P5_2	<u>1.9</u>	<u>1.2</u>	2.7	18.8	23.3	14.0	177	164	188	<u>851</u>	<u>841</u>	<u>862</u>	<u>746</u>	<u>739</u>	752	65	61	68
P5_20	<u>1.3</u>	<u>1.2</u>	<u>1.5</u>	<u>20.4</u>	<u>26.4</u>	<u>14.7</u>	175	170	181	<u>848</u>	838	<u>859</u>	732	<u>742</u>	721	61	54	68
P5_3	2.0	1.7	<u>2.4</u>	17.1	18.8	<u>15.3</u>	178	<u>180</u>	175	<u>853</u>	<u>844</u>	<u>861</u>	<u>743</u>	731	756	62	52	71
P5_4	<u>1.5</u>	<u>1.3</u>	<u>1.6</u>	18.6	23.8	13.6	177	168	185	<u>852</u>	835	<u>869</u>	<u>741</u>	726	754	66	51	81
P5_5	2.1	2.4	<u>1.8</u>	18.9	<u>24.8</u>	13.3	175	166	187	838	822	853	719	714	720	61	55	67
P5_6	<u>1.5</u>	1.5	<u>1.4</u>	19.1	23.8	<u>14.6</u>	178	170	188	<u>854</u>	<u>843</u>	<u>865</u>	<u>759</u>	<u>739</u>	777	62	59	65
P5_7	<u>1.2</u>	<u>1.3</u>	<u>1.4</u>	18.5	23.5	13.7	177	168	187	<u>849</u>	830	<u>868</u>	<u>749</u>	729	766	61	47	75
P5_8	3.2	2.6	3.7	19.2	<u>25.3</u>	13.0	182	156	<u>208</u>	839	813	<u>865</u>	739	730	750	54	48	59
P5_9	2.8	2.4	3.2	18.8	22.3	<u>15.4</u>	170	163	178	835	817	853	734	717	749	60	57	63
Pa_1	2.6	2.8	<u>2.3</u>	<u>20.6</u>	<u>25.5</u>	<u>15.5</u>	176	164	185	835	817	854	708	696	719	56	44	68
Pa_2	3.1	3.1	2.9	18.3	23.4	13.6	179	167	<u>193</u>	845	830	<u>860</u>	737	<u>740</u>	732	57	53	61
U1_1	2.6	2.7	<u>2.3</u>	<u>19.9</u>	<u>24.6</u>	<u>15.2</u>	187	<u>184</u>	191	840	825	855	734	727	742	55	50	60
U1_10	<u>1.9</u>	<u>1.3</u>	<u>2.3</u>	18.0	22.7	13.3	185	<u>179</u>	189	<u>849</u>	837	<u>862</u>	738	<u>735</u>	743	64	59	69
U1_11	2.2	1.6	<u>2.5</u>	19.0	23.2	<u>15.1</u>	181	162	<u>200</u>	845	830	<u>861</u>	726	713	736	59	51	67
U1_12	2.5	2.5	2.8	18.8	<u>24.2</u>	13.4	187	174	<u>202</u>	846	830	<u>862</u>	734	720	751	56	52	60
U1_13	<u>1.7</u>	1.7	<u>1.7</u>	18.6	22.4	<u>14.7</u>	171	168	176	833	815	852	730	711	748	55	48	61
U1_2	4.0	4.3	3.8	17.4	21.8	13.3	183	172	191	842	824	<u>859</u>	731	713	747	53	47	58
U1_3	<u>1.6</u>	1.7	<u>1.9</u>	19.1	23.8	14.5	182	172	<u>193</u>	841	827	856	740	721	762	47	46	49
U1_4	2.5	1.9	2.9	19.3	<u>25.2</u>	13.3	182	<u>178</u>	188	<u>848</u>	832	<u>863</u>	736	722	747	62	56	67
U1_5	2.1	2.1	<u>1.8</u>	17.8	23.0	12.4	<u>182</u>	172	191	836	823	849	710	710	710	50	49	52
U1_6	2.6	2.6	<u>2.3</u>	<u>21.1</u>	<u>26.6</u>	<u>15.4</u>	174	166	185	841	829	852	729	709	747	57	53	62
U1_7	2.3	2.2	<u>2.3</u>	19.0	<u>24.9</u>	12.9	176	165	187	836	813	<u>859</u>	727	727	726	53	43	63
U1_8	2.7	2.8	2.9	<u>19.8</u>	<u>24.3</u>	<u>15.4</u>	177	171	186	838	823	854	713	709	719	60	56	64
U1_9	<u>1.6</u>	1.9	<u>1.9</u>	18.2	23.0	13.4	175	156	<u>194</u>	846	826	<u>865</u>	730	<u>736</u>	721	59	47	73

U2_1	3.9	2.4	4.9	19.2	<u>24.2</u>	14.3	<u>185</u>	172	<u>196</u>	844	826	<u>862</u>	736	718	755	54	47	61
U2_2	3.2	3.8	2.8	19.1	22.6	<u>15.2</u>	175	169	180	834	822	846	728	728	726	54	47	61
U2_3	3.2	3.1	3.4	<u>20.6</u>	<u>26.2</u>	<u>14.9</u>	<u>183</u>	166	<u>198</u>	841	818	<u>863</u>	739	<u>737</u>	745	53	44	61
U2_4	3.1	2.3	4.1	17.7	22.2	13.4	172	161	182	833	815	852	728	731	724	58	55	62
U2_5	3.7	3.7	3.9	<u>21.3</u>	<u>24.7</u>	<u>17.1</u>	179	<u>175</u>	181	838	827	849	720	731	713	53	46	61
U2_6	2.7	2.7	3.2	<u>20.2</u>	<u>26.2</u>	13.9	<u>181</u>	171	189	841	826	856	747	<u>748</u>	750	57	52	62
U2_7	3.4	3.2	3.7	<u>20.3</u>	<u>24.2</u>	<u>16.2</u>	177	173	183	838	819	857	718	698	736	56	48	65
U2_8	3.5	2.7	4.3	<u>20.9</u>	<u>24.5</u>	<u>17.2</u>	<u>184</u>	<u>176</u>	192	841	830	852	729	715	746	54	51	58
Mean	2.5	2.2	2.8	19.0	23.9	14.2	179	169	189	842	827	858	731	722	740	58	51	64
LSD 5%	0.8	0.9	1.3	1.9	2.9	2.7	10	12	16	7	9	12	19	26	30	5	-	6
P	> 0.001	> 0.001	> 0.001	> 0.001	0.002	> 0.001	0.08	0.06	0.02	> 0.001	> 0.001	0.03	> 0.001	0.05	> 0.001	> 0.001	0.33	> 0.001