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2013 Small Grains Performance Trials for New York

Enclosed are the results of our 2013 small grains regional trials and the cumulative summaries over years. Because the rankings of the varieties and lines often change from year to year, only the multiple year summaries should be considered to be useful indicators of varietal performance in this region. Reproduction of any table in this report must include the entire table unless we approve the editing. The information herein is provided with the understanding that no discrimination is intended and no endorsement by Cornell University or its employees is implied.

Your comments and suggestions concerning this report are welcome. If you would like additional information or do not wish to receive this report in the future, please contact us. Summaries and information about the Cornell Small Grains Breeding & Genetics Project are maintained on our small grains web page:

<http://plbrgen.cals.cornell.edu/cals/pbg/programs/departmental/smallgrains/index.cfm>

We have continued to develop and test selections from our molecular marker-assisted breeding program in our soft white winter wheat breeding program. Our most recent varieties are Hopkins, Medina and Otsego, a new variety from Ohio State University. These selections have improved resistance to preharvest sprouting and fusarium head blight combined with the excellent agronomic performance of Caledonia. Otsego is a soft red winter wheat that has excellent grain yield and disease resistance to powdery mildew, leaf spot, glume blotch, leaf rust, wheat spindle streak mosaic virus, wheat soil borne mosaic virus and moderate resistance to fusarium head blight (scab). In collaboration with the University of Illinois, we have also released a new, high-yielding spring oat variety named Corral.

I wish to recognize the contributions of Research Support Specialist, David Benscher, Technical Assistant, James Tanaka, field assistant John Shiffer, and Extension Support Specialist Judy Singer to our project and thank them for their dedication.

Sincerely,

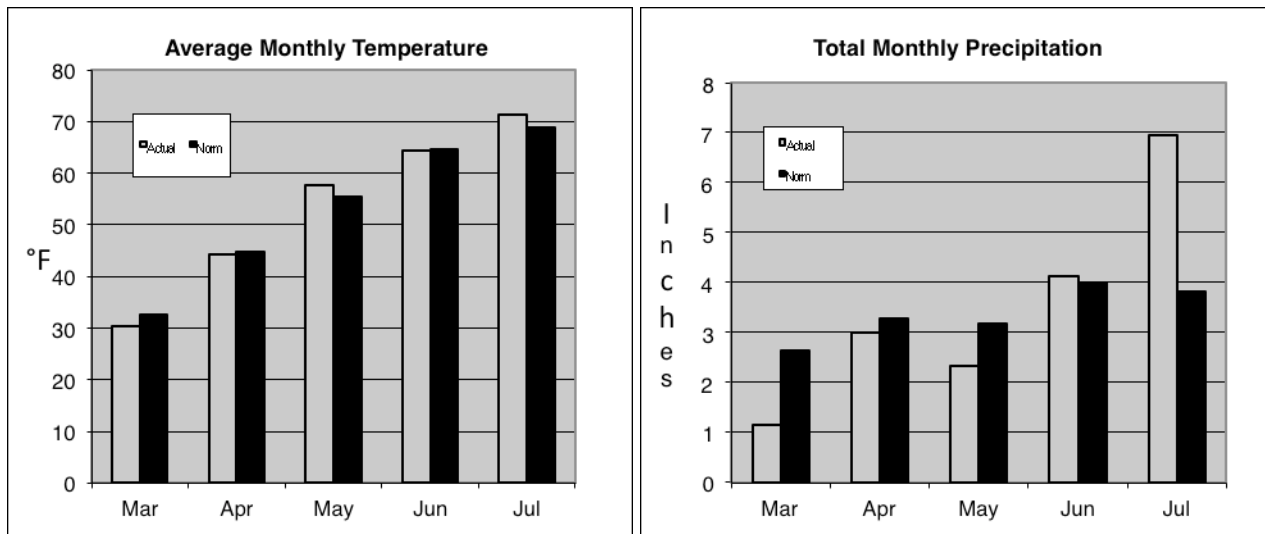
Mark E. Sorrells
Professor and Chair, Department of Plant Breeding & Genetics

Testing Procedures:

In 2013, the Soft White Winter Wheat, Red Winter Wheat, Winter Malting Barley, Winter Hybrid Rye, and Spring Oat regional trials were grown in four locations while the Spring Malting Barley Trial was grown in three locations with three replicates. The wheat and oat trials near Ithaca

consisted of 2 replicates while those out in the state consisted of 3 replicates. All trial plots are 6-rows, 4 meters long with 18 cm between rows. Prior to harvest, the plots are trimmed to 3 meters. Disease and lodging notes were recorded on a 0 to 9 scale with 0 being the best and 9 the poorest. All trials are planted in a randomized complete block design and analyzed by standard ANOVA. If there are indications of within replicate field variation a second ANOVA using a nearest-neighbor adjustment is computed based on the nearest 8-plot mean. If the coefficient of variation was reduced and the variance due to genotypes was the same or increased, those adjusted means were used for the summary. All trials are fertilized according to soil test recommendations for small grains. Winter grains trials generally receive a top dress of 38 kg/h (34 lbs/a) of actual N in the spring. For more information about small grains management see <http://ipmguidelines.org/FieldCrops>.

2013 Precipitation and Temperature



The winter grains trials were planted on October 5 in Ithaca, on September 25 in Dutchess, September 28 in Monroe and October 15 in Livingston County. The spring grains were planted on April 25 and 26 in Ithaca, April 23 in Steuben and Genesee and April 30 in Montgomery County. The growing season averaged about 0.5 degrees warmer than normal and rainfall was 0.5 inches above average rainfall with a total of 17.5 inches for the growing season in Ithaca.

Acknowledgments:

Our testing program depends on being able to test new varieties in the areas where they will be grown under actual farming conditions. We gratefully acknowledge the many farmers who have provided us with a test site for our regional trials over many years. This year, test sites were generously provided by Ron Gruchow in Livingston County, Ron Breslowski in Monroe County, Ken Migliorelli in Dutchess County, David Smith in Cayuga County, Rick Pedersen (organic) in Ontario County, Jim and Dave Wallace in Steuben County, Alex Harris in Genesee County, Andy Crowe in Montgomery County, and Henry Van Ness (Trumansburg). Without their support we would not be able to provide accurate, unbiased test results. Extension specialists Mike Stanyard and Bill Verbeten, Kevin Ganoe, and Justin O’Dea have been instrumental in arranging test sites, field days, and information distribution. Also, we thank Drs. Gary C. Bergstrom, William J. Cox, and Margaret E. Smith, extension faculty in the Departments of Plant Pathology, Crop and Soil Sciences, and Plant Breeding & Genetics for their excellent cooperation and support. We also gratefully acknowledge the financial support from the USDA NIFA Organic Research and Extension Initiative grant number 2011-51300-30697. Most importantly, a special thanks goes to Judy Singer for her help in proofreading the data and report.

2013 Soft White Winter Wheat Summaries – Cornell University

Entry	Grain Yield (kg/h)						Test Weight kg/hl	Lodging Score 0-9	Head Date 2 Loc	Winter Surv. %	Height cm	Preharvest		WSSMV 0-9	WSbMV 0-9	FHB Incid. %	FHB Sev. %	FHB Index	
	Regional Locations					Rank						Sprouting							
	lth-Ket	DutCo	LivCo	MonCo	Mean							0-9	Rank						
1 Houser	5301	2591	4413	5374	4420	16	72.3	30	3.0	5/25	N	92	5.2	25	2.0	0.3	na	na	na
2 Caledonia	4892	2505	3784	6412	4398	18	71.4	35	2.3	5/25	O	73	7.1	36	2.0	0.0	59	23	13
3 Cayuga	4841	2450	4148	4196	3909	35	75.6	2	3.7	5/27		94	1.9	4	1.7	0.3	na	na	na
4 Jensen	5196	3010	4212	3649	4017	31	72.7	27	6.8	5/28	W	89	3.1	10	0.7	2.7	66	20	13
5 Medina	5325	2416	4551	5336	4407	17	73.1	21	3.3	5/26	I	88	2.9	9	1.0	0.3	44	25	11
6 Hopkins	5294	2855	3979	5022	4287	23	72.7	28	3.3	5/25	N	82	4.8	22	1.7	0.3	48	11	5
7 NY99045-3110	5829	3121	4550	4484	4496	13	72.2	33	3.5	5/27	T	91	6.1	29	4.3	0.3	38	17	7
8 Otsego	5988	3357	3328	5323	4499	12	73.9	9	4.7	5/25	E	86	1.2	2	0.5	0.0	48	11	5
9 NY99059-249	5817	3106	4713	4615	4563	7	74.4	3	3.7	5/26	R	79	5.5	26	0.7	2.3	37	9	3
10 NY94046-150	5564	3388	4463	4560	4494	15	72.8	26	3.5	5/26		91	6.5	32	2.0	2.7	37	24	9
11 NY99056-161	5331	2793	4381	5586	4523	8	72.7	29	2.8	5/27	K	87	3.4	12	1.3	1.7	39	10	4
12 NY94063-117	5176	3624	4340	4000	4285	24	71.7	34	5.0	5/19	I	82	5.0	24	1.0	1.0	68	35	24
13 NY01016-AN	5773	3011	5243	6486	5128	1	74.3	4	1.2	5/25	L	87	3.8	14	0.7	0.3	50	16	8
14 NY07104-141	4368	2998	4425	3302	3773	37	73.8	11	6.3	5/26	L	88	3.1	11	1.3	2.3	24	5	1
15 NY99069-WC	4869	2930	5103	3833	4184	28	74.3	6	5.3	5/27		91	2.2	5	7.0	4.3	37	20	8
16 NY94025-136	5033	3345	4090	5566	4508	11	73.7	12	2.7	5/25		75	2.4	6	1.0	0.3	55	15	8
17 NY96153-167	5187	2637	4081	6470	4594	5	74.0	8	2.5	5/24		79	4.2	16	2.7	0.0	70	18	13
18 94046-174	5462	2933	3808	5851	4514	10	72.2	32	1.2	5/26		91	6.7	34	3.0	2.3	47	24	11
19 94052-207	6133	3360	4449	5027	4742	3	73.1	23	2.8	5/20		90	4.6	19	2.3	0.0	45	21	9
20 96028-318	5047	2854	4313	3805	4005	32	70.8	36	3.0	5/27		96	1.7	3	2.3	0.3	66	30	20
21 NY07020-147	5922	2476	4001	6030	4607	4	73.4	17	2.0	5/24		77	3.4	13	4.0	0.7	68	17	11
22 NY07023-150	5467	2708	3386	4338	3975	34	73.7	14	3.8	5/26		92	6.8	35	0.7	0.3	62	25	16
23 NY01066-118	5184	3431	4859	4863	4584	6	70.1	37	1.3	5/28		85	2.5	7	1.0	0.0	67	60	40
24 NY03093&94-150	4864	2881	3525	4645	3979	33	73.1	22	4.5	5/27		86	4.9	23	1.7	1.0	76	38	29
25 NY03010-157	4996	2721	3635	5614	4242	27	74.3	5	2.2	5/25		74	4.5	18	1.3	0.3	71	24	17
26 NY03082-183	4962	3297	4000	3136	3849	36	72.9	24	4.8	5/19		83	6.4	30	2.3	0.7	43	25	11
27 NY03008-200	5265	2853	2372	6693	4296	22	73.8	10	1.5	5/25		82	4.1	15	0.0	0.0	71	24	17
28 NY99069-249	6009	2835	4932	5342	4779	2	74.2	7	4.0	5/25		74	6.4	31	1.3	3.0	41	10	4
29 NY01066-278	5077	2496	4344	5137	4264	26	73.2	20	2.8	5/25		86	5.8	28	1.3	1.0	44	18	8
30 NY99069-326	5767	2742	4252	4584	4336	20	72.3	31	7.0	5/25		80	5.5	27	2.3	1.3	55	16	9
31 NY99069-352	5236	3128	3978	5737	4520	9	73.3	18	4.2	5/25		72	4.6	20	1.0	0.3	51	14	7
32 NY03087&88-649	4711	2855	2766	5792	4031	30	73.5	16	3.5	5/24		75	4.2	17	1.0	0.3	na	na	na
33 NY03092-652	5287	3115	4098	4824	4331	21	72.8	25	4.3	5/25		77	4.6	21	1.0	0.0	na	na	na
34 NY03087&88-658	4918	2907	4539	5616	4495	14	73.3	19	3.5	5/25		76	6.6	33	1.0	0.7	na	na	na
35 7388xD8006 - 18	5331	2700	4291	3840	4040	29	73.7	13	6.3	5/25		91	2.8	8	1.3	0.0	na	na	na
36 NY01002-AN	4918	2275	4938	5214	4336	19	73.6	15	2.2	5/26		76	7.9	37	1.0	0.0	na	na	na
37 NY06073-46	4694	2921	3743	5779	4284	25	75.6	1	2.3	5/24		74	0.0	1	1.0	0.0	na	na	na
Mean	5271	2909	4163	5029	4343		73.2		3.5	5/25		83	4.4		1.7	0.9	53	21	12
CV	4.4	11.9	12.5	16.3															

Entry	Grain Yield						Test Weight		Lodging		Head Date 2 Yr	FHB %Inc 2 Yr	FHB %Sev 2 Yr	Preharv Sprout 2 Yr	WSSMV Rating 2 Yr	WSbM Rating 2 Yr	Height cm		
	4 Year		3 Year		2 Year		3 Yr	2 Yr	0-9	0-9									
	kg/h	b/a	kg/h	b/a	kg/h	b/a													
1 Houser	4809	72	4548	68	4596	68	73.7	58.0	73.4	57.8	2.0	3.0	5/24	na	na	4.6	1.8	0.3	96
2 Caledonia	4872	72	4574	68	4630	69	73.8	58.1	73.6	58.0	1.1	1.6	5/24	51	34	5.9	1.5	0.2	76
3 Cayuga	4333	64	3999	59	4060	60	76.5	60.2	75.8	59.7	2.3	3.4	5/26	na	na	1.7	1.4	0.2	101
4 Jensen	4719	70	4441	66	4471	66	74.8	58.9	74.4	58.6	2.7	4.0	5/27	46	19	3.0	0.4	3.8	93
5 Medina (NY88046-7088)	4941	73	4648	69	4732	70	74.9	59.0	74.3	58.5	1.8	2.6	5/25	33	17	2.8	1.1	0.2	90
6 Hopkins (NY03180FHB)	4815	72	4582	68	4672	69	74.0	58.3	73.5	57.9	1.7	2.6	5/24	34	19	4.1	1.2	0.5	86
7 NY99045-3110	4981	74	4635	69	4724	70	73.8	58.1	73.1	57.6	2.0	3.0	5/26	25	12	5.1	4.8	0.8	94
8 Otsego			4735	70	4712	70	74.6	58.7	73.8	58.1	2.4	3.7	5/24	36	11	0.8	0.5	0.2	88
9 NY99059-249			4659	69	4861	72	75.6	59.5	75.0	59.1	1.8	2.8	5/25	28	10	4.8	0.7	2.3	83
10 NY94046-150			4610	69	4738	70	74.2	58.4	73.9	58.2	1.9	2.9	5/25	24	18	5.3	2.6	2.3	93
11 NY99056-161					4904	73			74.2	58.4		3.5	5/25	26	10	3.3	1.3	2.6	87
12 NY94063-117					4700	70			73.3	57.7		3.9	5/22	47	27	4.0	1.1	0.5	84
13 NY01016-AN					5218	78			75.3	59.3		1.6	5/24	30	21	3.3	0.6	0.2	88
14 NY07104-141					4359	65			75.2	59.2		3.7	5/25	15	4	2.4	1.3	3.3	91
15 NY99069-WC					4487	67			76.1	59.9		3.2	5/26	23	13	2.6	6.8	4.7	94

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2013 Red Winter Wheat Summaries - Cornell University

Entry	Grain Yield (kg/h)						Test kg/hl	Lodg. Rank	Head 0-9	Date	Preharvest		Winter Surv. %	Height cm	wssmv 0-9	wsbmv 0-9	FHB				
	Regional Locations										Rank	Rank					Rank	Rank	Incid. %	Sev. %	Index
	Ith-Ket	DutCo	LivCo	MonCo	Mean	Rank															
1 Otsego	5212	3835	2759	5746	4388	23	74.9	8	2.8	5/26	1.3	18	N	79	0.3	1	48	11	5		
2 Emmitt	5272	3442	4543	6982	5060	11	73.9	20	2.8	5/26	0.2	3	O	79	7.0	0	40	17	7		
3 Pioneer 25R39	5764	3199	3141	6562	4666	19	73.8	21	3.7	5/26	0.7	14		75	4.3	0	35	14	5		
4 HY116-SRW	5471	3499	4290	5608	4717	18	72.1	25	4.8	5/26	3.6	24	W	79	0.7	5	66	18	12		
5 OH02-12686	6800	3377	4839	6561	5394	6	74.2	14	1.5	5/28	5.7	25	I	81	0.7	0	35	21	7		
6 Bromfield	5169	3718	4801	5744	4858	16	74.1	15	2.3	5/27	3.1	23	N	81	2.0	0	41	10	4		
7 OH04-268-39	6320	4442	4564	5670	5249	7	73.2	24	3.3	5/28	1.0	17	T	85	1.0	3	38	13	5		
8 DF55	6351	3687	4012	5704	4939	13	75.4	6	1.8	5/26	0.9	16	E	73	1.7	0	58	13	8		
9 DF75	5688	3880	3262	7095	4981	12	74.8	9	2.8	5/25	0.1	1	R	74	2.0	0	57	18	10		
10 Pioneer 25R34	7373	3447	5570	5548	5484	4	74.1	17	1.8	5/25	1.6	19		77	7.7	1	40	10	4		
11 FSX815	6459	3836	4906	4333	4884	15	73.4	22	2.5	5/24	0.6	10	K	74	7.0	3	81	15	12		
12 IL05-4236	6311	4310	2474	4139	4309	25	75.8	5	5.7	5/21	0.4	7	I	77	3.3	0	67	17	12		
13 DANW1001	6426	4478	4893	4999	5199	9	74.0	18	3.8	5/29	1.8	20	L	82	4.7	0	44	22	10		
14 DANW1002	6464	3941	4623	7451	5620	3	73.2	23	2.8	5/27	0.3	6	L	78	1.0	0	25	14	4		
15 Pioneer 25R46	8384	4104	5344	6866	6174	1	74.1	16	1.3	5/25	1.9	21		69	1.7	0	37	9	3		
16 Pioneer 25R40	8930	4298	5388	5677	6073	2	74.7	11	2.8	5/26	0.8	15		68	3.3	0	61	14	8		
17 05SH15.030	6264	3815	4462	2884	4356	24	74.4	13	3.7	5/26	0.1	2		87	6.7	4	37	13	5		
18 Brome	4621	2729	3910	6313	4393	22	74.7	12	3.5	5/31	0.6	13		98	6.7	5	49	15	7		
19 MO081652	6228	3418	4480	6706	5208	8	77.6	1	1.3	5/25	0.4	8		77	1.7	1	36	9	3		
20 MO080104	6120	4168	4853	6787	5482	5	77.5	2	1.2	5/25	0.6	11		78	1.7	0	37	11	4		
21 OH08-180-48	5846	3320	3239	5672	4519	20	74.8	10	3.5	5/27	0.2	4		72	4.3	0	42	14	6		
22 VA08MAS-369	6315	3459	4074	5256	4776	17	76.4	3	2.7	5/25	0.4	9		71	0.7	2	43	19	8		
23 KY03C-1237-32	4226	3050	4777	7634	4922	14	75.9	4	0.5	5/24	0.2	5		68	1.3	0	58	12	7		
24 P05222A1-7	3063	2905	4946	6861	4444	21	74.0	19	0.5	5/27	0.6	12		75	2.0	4	33	9	3		
25 VA09W-73	6749	3576	3241	7172	5184	10	75.2	7	2.3	5/27	1.9	22		73	5.7	5	55	17	9		
Mean	6073	3677	4296	5999	5011		74.7		2.6	5/26	1.2			77	3.2	1.3	47	14	7		
CV	11.8	8.3	19.3	13.0																	

Cumulative Summary																		
Entry	Grain Yield						Test Wt(2Yr) kg/hl lb/b	Lodg. 2 Yr	Height 2 Yr	Head 2 Yr	Winter Surv. 2 Yr	Preharv Sprout 2 Yr	wssmv Rating 2 Yr	wsbmv Rating 2 Yr	FHB Incid. 2 Yr	FHB Sev. 2 Yr	FHB Index 2 Yr	
	4 Year		3 Year		2 Year													
	kg/h	b/a	kg/h	b/a	kg/h	b/a												
1 Otsego	5014	75	4757	71	4600	68	75.1	58.7	2.8	77	5/26	99	0.8	0.4	0.7	36	11	3.9
2 Emmitt	5278	78	5035	75	5068	75	75.4	58.9	0.4	77	5/27	98	0.9	6.8	2.3	26	24	5.1
3 Pioneer 25R39	5027	75	4870	72	4859	72	75.3	58.8	2.5	74	5/27	99	1.1	5.4	2.5	21	9	2.6
4 HY116-SRW	5193	77	4991	74	4996	74	74.0	57.8	2.3	77	5/27	96	2.8	0.7	2.3	41	13	6.5
5 OH02-12686	5556	83	5271	78	5238	78	76.0	59.4	1.3	81	5/29	99	3.5	0.7	0.2	22	15	4.0
6 Bromfield	5092	76	4936	73	4932	73	75.9	59.3	2.3	81	5/28	98	1.9	1.6	0.0	28	10	2.7
7 OH04-268-39	5361	80	5076	75	5131	76	74.8	58.4	1.5	84	5/29	99	0.7	1.3	2.0	26	14	3.4
8 DF55			5093	76	5052	75	76.1	59.5	1.5	73	5/27	100	2.4	1.5	0.3	46	13	5.9
9 DF75			5242	78	5304	79	76.5	59.7	2.0	75	5/26	99	0.3	3.3	0.5	43	24	9.2
10 Pioneer 25R34			5334	79	5328	79	74.7	58.3	1.3	76	5/26	98	2.5	6.9	2.8	25	7	2.2
11 FSX815					5175	77	74.3	58.1	1.5	73	5/24	99	1.8	6.4	2.7	56	12	7.3
12 IL05-4236					4580	68	76.7	59.9	5.4	80	5/21	98	1.9	3.9	0.8	39	15	6.5

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2013 Spring Oat Regional and Cumulative Summaries - Cornell University

Entry	Grain Yield (kg/h)				Test Wt (kg/hl)				Lodging	Head Date	Height cm	
	lth-Sny	lth-Hel	MontCo.	SteuCo.	Mean	Rank	Mean	Rank				
1	OGLE	2833	2416	3261	3012	2881	18	39.0	19	3.4	6/23	88
2	NEWDAAK	3635	2439	3257	3350	3171	14	41.3	11	6.0	6/22	90
3	IL00-7267(Corral)	4501	3208	3392	2806	3477	2	41.6	8	2.0	6/24	93
4	IL02-8658	3882	2605	3334	3323	3286	10	40.9	13	2.6	6/22	88
5	IL04-7077	2684	2840	2901	2904	2832	19	43.6	2	2.6	6/23	80
6	IL05-9931	3954	2907	3023	3142	3257	13	41.6	9	1.3	6/26	88
7	SD081936	4020	2849	2838	3328	3259	12	42.0	6	2.6	6/22	85
8	SD081107	4547	3267	3089	3099	3501	1	39.8	15	5.7	6/23	88
9	SD081108	4153	3116	3243	3000	3378	5	42.9	3	4.8	6/23	80
10	MN09255	3629	3514	3118	3005	3316	8	41.5	10	5.5	6/25	93
11	OA1286-1	3420	2688	2225	2900	2808	20	42.5	4	4.8	6/26	96
12	IL06-5433	3433	2351	2606	3512	2976	17	44.1	1	0.3	6/23	85
13	IL07-8721	3555	2386	3461	2528	2982	16	39.8	16	0.2	6/25	71
14	P021A1-66-2	4065	2374	3439	3215	3273	11	42.4	5	3.2	6/24	83
15	P0216A1-1-45	3854	2190	3191	2926	3040	15	40.8	14	2.2	6/24	81
16	SD090965	3972	3290	3446	3136	3461	3	39.1	18	5.6	6/27	85
17	SD090248	4584	3121	2625	3127	3364	6	41.8	7	5.3	6/26	78
18	MN10209	3626	2959	3594	3156	3334	7	39.4	17	7.4	6/27	93
19	WIX9509-3	3577	3365	3538	3294	3443	4	41.1	12	3.8	6/24	83
20	WIX9562-5	4095	2749	3284	3110	3310	9	38.9	20	5.1	6/22	83
Mean		3801	2832	3143	3094	3217		41.2		3.7	6/24	85
CV		8.3	16.1	8.6	13.7							

Cumulative Summary		Grain Yield				Test Weight				Head Date	Lodging 0-9	Height cm		
Entry	7 Years		6 Years		3 Years		2 Years		2 Years		2 Yr	2 Yr	2 Yr	
	kg/h	b/a	kg/h	b/a	kg/h	b/a	kg/h	b/a	kg/hl	lbs/b				
1	OGLE	2890	81	2994	83	2727	76	3094	86	42.7	33.4	6/19	1.7	89
2	NEWDAAK	3018	84	3094	86	2889	81	3218	90	46.5	36.4	6/17	3.0	98
3	IL00-7267(Corral)	3390	95	3495	97	3346	93	3850	107	46.8	36.6	6/20	1.0	91
4	IL02-8658			3209	89	3044	85	3621	101	46.0	35.9	6/18	1.3	93
5	IL04-7077					3072	86	3406	95	48.3	37.7	6/19	1.3	83
6	IL05-9931					3112	87	3662	102	46.1	36.1	6/20	0.7	84
7	SD081936					3318	93	3754	105	47.6	37.2	6/17	1.3	86
8	SD081107							3784	106	45.3	35.4	6/19	2.8	84
9	SD081108							3646	102	47.8	37.3	6/19	2.4	86
10	MN09255							3783	105	47.3	37.0	6/19	2.8	90
11	OA1286-1							3410	95	47.4	37.1	6/20	2.4	98

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2013 Winter Malting Barley Regional Trial Summary – Cornell University

Entry	Grain Yield (kg/h)							Test		Lodg. Height			Net		Wint
	Regional Locations							Weight		0-9	cm	Date	Blotch	0-9	Surv
	lth-Ket	DutCo	LivCo	MonCo	Mean	bu/ac	Rank	kg/hl	Rank						
1	Charles	4540	1812	2855	N	3069	57	18	52.6	20	N	62	5/21	5.3	92
2	Strider	5591	2164	4080	O	3945	73	6	58.5	13	O	79	5/21	4.3	95
3	McGregor	4188	1726	2664		2859	53	19	57.7	18	N	73	5/20	4.7	96
4	Saturn	6363	2837	4423	D	4541	84	1	57.1	19	E	69	5/20	4.3	99
5	10467p2	6182	1835	3222	A	3746	70	7	58.5	14		67	5/19	3.0	97
6	10467r2	6155	2641	3485	T	4094	76	3	59.5	9		69	5/19	3.3	95
7	10467r4	6856	1873	3829	A	4186	78	2	58.1	16		69	5/20	4.3	90
8	03/220/158	5525	1361	3438		3441	64	14	58.1	17		72	5/25	3.3	96
9	04/153/2	4838	1804	3390		3344	62	15	60.9	1		78	5/26	1.0	94
10	04/002/23	5850	1274	3262		3462	64	12	58.6	12		60	5/18	3.7	97
11	VA09B-34	4870	1926	2658		3151	59	17	60.8	4		70	5/14	7.3	96
12	VA10B-43	5586	2474	2644		3568	66	10	59.6	7		63	5/16	4.3	91
13	KWS Scala	4858	2050	2967		3291	61	16	58.3	15		69	5/22	3.3	96
14	Mystic	5381	1837	3230		3482	65	11	60.1	5		63	5/18	3.5	94
15	Salanandre	5476	2216	4190		3961	74	5	59.8	6		65	5/19	5.7	97
16	Etincel (1205 1H23)	6769	2307	3181		4086	76	4	59.6	8		72	5/20	6.0	98
17	Sytepee (SY209-66)	5593	1386	3836		3605	67	8	60.8	2		74	5/23	4.0	96
18	SY209-72	5124	2106	3485		3572	66	9	59.1	11		70	5/25	3.3	95
19	Endeavor	5208	1846	3324		3460	64	13	60.8	3		77	5/24	4.3	74
20	WintMalt	3667	1448	3226		2781	52	20	59.5	10		76	5/26	2.7	94
	Mean	5431	1946	3369		3582	67		58.9			70	5/21	4.1	94
	CV	8.8	19.7	30											

Cumulative Summary															
Entry	Grain Yield				Lodg. 0-9	Height cm	Head Date	Winter Surv.	Kernel Wt (mg)	on 6/64" (%)	Malt Extract (%)	Barley Protein (%)	DP °ASBC	Quality Score	
	2 Year		Test Wt(2Yr)												
	kg/h	b/a	kg/hl	lb/b											
1	Charles	3735	69	52.2	40.8	1.8	76	5/17	83	30.1	92.2	78.8	12.6	142	59
2	Strider	5123	95	57.3	44.8	1.8	90	5/19	89	32.8	74.9	76.4	11.1	55	17
3	McGregor	4774	89	60.2	47.0	2.8	82	5/17	95	33.3	80.5	76.6	11.6	60	24
4	Saturn	6103	113	58.2	45.4	1.3	77	5/17	88	35.8	88.8	75.0	10.5	96	15
5	10467p2	5550	103	59.8	46.7	1.8	81	5/16	92	30.3	87.5	78.4	10.7	95	35
6	10467r2	5753	107	61.8	48.3	1.5	82	5/16	92	34.3	93.2	81.4	9.8	103	39
7	10467r4	5705	106	61.0	47.6	2.3	79	5/17	91	32.8	93.0	80.9	10.6	101	46
8	03/220/158	5282	98	58.6	45.8	1.2	84	5/22	89	33.5	90.2	78.4	11.3	157	38
9	04/153/2	5021	93	62.5	48.8	0.7	92	5/23	88	40.1	96.9	79.9	10.9	122	35
10	04/002/23	4660	87	58.8	45.9	2.7	75	5/16	93	29.8	79.3	78.9	11.2	119	26
11	VA09B-34	4800	89	64.0	50.0	2.5	83	5/11	92	33.9	93.2	75.8	12.6	70	26
12	VA10B-43	4815	89	62.2	48.6	3.0	79	5/14	82	28.3	77.4	76.1	12.7	47	24
13	KWS Scala	4977	93	60.9	47.6	0.7	80	5/19	83	42.3	98.2	80.9	12.0	178	62
14	Mystic	4817	90	62.5	48.8	1.0	79	5/16	90	42.9	96.7	80.2	12.6	138	47
15	Salanandre	4932	92	62.0	48.4	1.3	78	5/17	89	40.8	94.4	79.8	12.0	121	49
16	Etincel (1205 1H23)	5740	107	61.5	48.0	1.7	86	5/17	89	32.4	92.8	78.2	10.6	114	24
17	Sytepee (SY209-66)	5060	94	63.0	49.2	0.7	82	5/19	83	42.3	97.1	82.3	10.4	188	55
18	SY209-72	5034	94	60.9	47.6	1.2	85	5/22	86	38.9	89.7	81.2	10.4	120	41

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2013 Spring Malting Barley Regional Summary - Cornell University

Entry	Grain Yield (kg/h)					Test Wt (kg/hl)		Lodging	Head Date	Height cm	Foliar Disease (0-9)	
	Ith-Sny	MonCo.	MontCo.	Mean	Rank	Mean	Rank					
1	Herta	3687	3933	1983	3201	8	62.4	4	1.7	6/27	75	6.0
2	Conlon	3639	3436	1718	2931	12	60.3	7	3.5	6/17	68	1.7
3	18-20	3161	3419	1043	2541	17	56.0	17	4.5	6/27	63	4.7
4	Odyssey	2967	3503	634	2368	21	55.3	19	4.3	6/28	60	5.3
5	Overture	3039	3175	950	2388	19	53.9	22	5.0	6/29	63	4.3
6	Genie	3098	3246	784	2376	20	55.1	20	2.7	6/27	60	4.7
7	Lacey	3928	3948	3054	3643	2	60.2	9	1.8	6/19	70	1.7
8	Quest	4063	3878	2344	3429	3	60.3	8	2.5	6/19	80	2.3
9	M145	3892	3906	2390	3396	5	60.8	6	1.8	6/21	90	3.3
10	M150	4076	3454	2464	3332	7	60.1	10	2.5	6/21	80	2.7
11	M152	3386	4107	2552	3348	6	59.8	11	1.7	6/21	78	2.0
12	KWS Asta	2939	3929	677	2515	18	53.1	23	3.8	6/28	63	4.0
13	KWS Irina	2613	3706	663	2328	22	54.8	21	3.0	6/29	50	3.3
14	KWS Thessa	3088	3964	1134	2728	16	55.9	18	3.3	6/27	53	3.7
15	KWS Atrika	3509	3770	1314	2865	13	57.2	16	2.8	6/27	66	4.3
16	Cerveza	3518	3413	2123	3018	11	59.1	13	2.0	6/28	70	7.3
17	Newdale	3851	4128	2256	3411	4	59.2	12	0.5	6/28	75	5.7
18	AAC Synergy	3848	4526	2690	3688	1	58.7	14	0.7	6/27	71	6.3
19	AC Metcalfe	3090	3375	1730	2732	15	58.2	15	3.2	6/29	70	3.7
20	HYCA172	2955	3367	2177	2833	14	62.2	5	1.0	6/14	63	2.3
21	HYCA244	3536	3447	2354	3112	9	64.9	2	0.7	6/18	68	3.0
22	HYCA284	2340	2563	1628	2177	23	67.7	1	0.3	6/22	65	3.3
23	HYCA302	3535	3372	2375	3094	10	62.9	3	0.5	6/28	95	7.0
Mean		2933	2933	2933	2933		59.0			6/24	69	
CV		8.5	13.8	13.1	13.8							

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2012-13 OREI Organic Winter Wheat Trial - All Locations

Entry	Variety	Grain Yield (kg/h)				Test Weight		Lodg. Ht (cm)		Head Date	
		FV	PA	WB	Mean	Rank	(kg/hi)	Rank	Mean		Mean
1	Red Fife	2199	1571	2082	1951	38	73.3	19	0.9	116	5/30
2	Arapahoe	2710	2903	4021	3211	7	73.9	16	0.1	87	5/28
4	American Banner	2686	2383	3465	2845	28	73.2	21	1.6	115	5/31
5	Fulcaster	2821	2246	3471	2846	27	73.6	17	2.2	116	6/1
6	Gold Coin	2398	2260	3580	2746	32	72.1	30	1.4	109	6/2
7	Genesee Giant	2565	2134	3994	2898	23	73.1	23	0.5	105	5/31
8	Pride of Genesee	2334	2239	3605	2726	33	75.7	3	1.4	120	6/2
9	Vermont Winter Reed	2323	2091	3522	2645	36	70.8	34	0.7	109	6/2
10	Grandprize	2555	2287	3404	2749	31	72.9	25	1.5	109	6/1
11	Forward	3007	2439	3872	3106	12	73.3	20	0.4	104	6/1
12	Honor	2363	2493	3640	2832	29	71.6	32	1.9	103	5/30
13	Valprize	2564	2601	3839	3001	17	72.7	26	1.7	112	6/2
14	Golden	2281	2053	3436	2590	37	70.3	37	1.7	106	6/3
15	Clark's Cream	2419	2475	3987	2961	20	73.1	22	0.2	96	5/28
16	Yorkwin	2620	2462	3851	2978	19	72.5	28	1.5	113	6/3
17	Genesee	2792	2816	4165	3258	5	71.6	33	1.6	109	6/1
18	Yorkstar	2608	2784	4264	3219	6	70.4	36	1.0	107	5/31
19	Frederick	2593	2573	3651	2939	22	72.9	24	0.3	104	5/30
20	Arrow	2676	2880	4643	3400	1	71.7	31	0.1	99	5/28
21	Susquehanna	2672	2802	4358	3277	4	70.7	35	0.1	89	6/1
22	NXO5M4180-6 (waxy)	2169	2907	3880	2986	18	70.0	38	0.1	82	5/28
23	NXO4Y2107 (waxy)	2319	2578	3974	2957	21	75.1	6	0.0	85	5/26
24	AC Morely	2585	2648	3948	3060	15	74.9	9	0.2	96	5/29
25	Warthog	2901	2932	3999	3277	3	74.9	8	0.0	89	5/29
26	NuEast	2065	3069	4190	3108	11	76.7	1	0.0	78	5/27
27	Appalacian White	2346	3030	4097	3158	8	75.1	5	0.0	79	5/27
28	ARS05-1044	2284	2500	4489	3091	14	74.6	11	0.3	78	5/25
29	ARS07-0785	2809	2618	3989	3139	10	74.4	13	0.0	71	5/28
30	ARS07-1214	2674	2625	3990	3097	13	74.9	7	0.0	78	5/28
31	ARS08-0161	2259	2851	3487	2866	25	72.7	27	0.0	73	5/29
32	ARS08-1059	2295	2578	3123	2665	35	75.4	4	0.0	76	5/26
33	ARS09-173	2510	3243	4182	3312	2	76.6	2	0.4	83	5/26
34	Jaggat (HRWW)	2859	2754	3812	3142	9	74.7	10	0.0	75	5/24
35	Expedition	2444	2539	4128	3037	16	74.6	12	0.1	87	5/28
36	Maxine	2008	2580	3527	2705	34	73.6	18	0.2	79	5/27
37	Harvard	2685	2278	3602	2855	26	73.9	15	0.3	92	5/29
38	Zorro	2609	2075	3939	2874	24	72.2	29	0.1	98	6/2
39	Redeemer	2585	2398	3384	2789	30	74.2	14	0.3	89	5/30
40	Alauda (2013 only)	2196	2782	2794	2591		75.6		0.0	103	6/9
	Mean	2507	2551	3779	2946		73.4		0.6	95	5/30

* Note there is no entry #3 because it was a local check that could not be summarized over locations

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2012-13 OREI Organic Spring Wheat Trial - Freeville

Entry	Variety	Grain Yield (kg/h)				Test Weight		Lodg.	Ht (cm)	Head Date	
		FV	PA	WB	Mean	Rank	(kg/hl)	Rank	Mean	Mean	Mean
1	Stoa	2755	1693	3500	2649	12	68.5	17	0.0	83	6/13
2	Red Fife	2432	1208	2803	2148	19	68.8	15	1.2	119	6/11
3	RB07	3138	1742	3853	2911	6	70.2	12	0.3	83	6/17
4	ND735	3137	1668	3944	2917	5	71.8	4	0.1	92	6/11
5	Ada	2587	1623	3634	2615	14	72.3	3	0.0	82	6/10
6	MN00261-4	3292	1797	3807	2965	3	71.5	5	0.0	85	6/12
7	Tom	2997	1804	4201	3001	1	73.0	2	0.0	91	6/14
8	MN06078W	2875	1484	3734	2698	9	69.6	13	1.4	90	6/13
9	Steele	3343	2050	3357	2917	4	71.2	7	0.0	89	6/13
10	Rollag (MN05214-3)	2737	1550	3673	2654	11	71.4	6	0.3	80	6/13
11	Sabin	3332	2022	3599	2984	2	71.1	8	0.2	84	6/11
12	Louise	2570	1308	3576	2485	17	66.7	21	1.3	91	6/10
13	MN06079W	2719	1533	3323	2525	16	67.4	20	1.4	81	6/10
14	Glenn	2873	1840	3634	2783	8	74.1	1	0.0	89	6/12
15	Ulen	3098	1835	3684	2872	7	70.4	11	0.2	89	6/12
16	Reed	2568	1204	3113	2295	18	63.9	22	1.1	79	6/14
17	Grandin	3078	1292	3609	2660	10	69.5	14	0.0	90	6/10
18	McNeal	2928	1548	3388	2621	13	70.4	10	0.0	91	6/11
19	Thatcher	2004	903	2760	1889	20	67.5	19	1.2	111	6/11
20	AC Barrie	2665	1368	3619	2551	15	70.9	9	0.6	99	6/15
21	Mida	1900	914	2709	1841	22	68.8	16	0.9	113	6/12
22	Ceres	1879	1329	2352	1853	21	68.1	18	1.3	108	6/11
23	Marquis (2013 only)	2986	1358	2878	2407		76.2		0.5	94	6/10
24	Dylan (2013 only)	2536	1200	2833	2190		71.4		0.3	88	6/10
	Mean	2768	1511	3399	2560		70.2		0.5	92	6/12

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2012-13 OREI Organic Winter Spelt Trial - All Locations

Entry	Variety	Grain Yield (kg/h)				Test Weight		Lodg.	Ht (cm)	Head Date	
		FV	PA	WB	Mean	Rank	(kg/hl)				Rank
1	<i>Comet**</i>	1822	5316	3055	3398		28.2		0.5	75	6/2
2	Frank	2653	1436	2407	2165	2	35.4	1	0.7	110	6/10
3	Maverick	2928	1846	2292	2355	1	30.7	3	1.4	103	5/30
4	<i>Oberkorn**</i>	2854	1565	3660	2693		35.2		0.0	111	5/31
5	<i>Oberkulmer</i>	2499	na	2254	2376		30.9		0.0	126	6/8
6	PI348159	2425	1363	2628	2138	3	34.0	2	0.9	110	6/10
7	<i>Sungold**</i>	1914	6619	2198	3577		29.4		0.0	104	6/10
Mean		2442	3024		2672		32.0		0.5	106	6/5

* Oberkulmer yield, lodging, height, and heading date means are for two locations

**Comet and Sungold tested in 2013 only. Oberkorn tested only in 2012.

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2012-13 OREI Organic Spring Spelt Trial - All Locations

Entry	Variety	Grain Yield (kg/h)				Test Weight		Lodg.	Ht (cm)	Head Date	
		FV	PA	WB	Mean	Rank	(kg/hl)				Rank
1	<i>94-288*</i>	2202	1125	na	1664		38.4		2.8	94	6/12
2	AC Boveria	2096	783	3758	2212	2	33.0	2	4.4	122	6/24
3	CDC Zorba	2533	1256	4553	2781	1	33.2	1	1.6	118	6/23
4	<i>Forage Spelt*</i>	2250	1152	na	1701		45.9		3.0	135	6/19
5	<i>Red Chaff*</i>	2036	1059	na	1548		43.2		1.5	105	6/13
Mean		2223	1075	4155	1981		38.7		2.7	115	4/6

*These three varieties were only tested in 2013 at Freeville and in Pennsylvania.

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2012-13 OREI Organic Spring Emmer Trial - All Locations

Entry	Variety	Grain Yield (kg/h)				Test Weight		Lodg.	Ht (cm)	Head		
		FV	PA	WB	ND	Mean	Rank				kg/hl	Rank
1	Bowman	2022	578	1907	2756	1816	11	44.7	9	4.4	107	6/23
2	<i>Bread 4*</i>	918	452	766	na	712		28.7		6.8	90	6/19
3	Common-H	2019	598	2058	2505	1795	12	44.8	8	4.6	106	6/23
4	Common-M	2293	601	2263	2943	2025	8	46.0	7	3.5	110	6/23
5	Common-MC	2393	687	2193	3018	2073	6	46.8	5	3.4	110	6/23
6	Common-R	2222	508	2133	2621	1871	10	44.2	10	4.2	107	6/24
7	Debra	1554	1089	2747	2096	1872	9	69.1	1	0.6	65	6/15
8	Lucille	2820	802	3216	3581	2605	1	46.8	6	3.7	112	6/22
9	ND Common	2658	891	2984	3382	2479	4	47.7	3	4.4	112	6/23
10	<i>Neigel*</i>	751	448	1000	na	733		28.1		4.1	105	6/29
11	PI254148	1693	669	3217	2643	2055	7	37.8	13	3.0	73	6/15
12	PI254162	1523	410	1778	3127	1709	13	39.1	12	5.8	87	6/17
13	<i>PI306535*</i>	2983	1223	4418	na	2875		46.6		2.8	113	6/21
14	<i>PI538722*</i>	1108	352	1178	na	879		31.9		3.9	108	6/25
15	Red Vernal	2550	839	3206	3589	2546	2	47.3	4	3.5	115	6/23
16	TM23	2255	438	2340	3757	2197	5	42.8	11	2.0	103	6/22
17	Vernal	2699	917	3050	3500	2541	3	48.1	2	3.0	111	6/22
18	<i>Yaroslav*</i>	1788	605	1194	na	1196		33.8		6.2	104	6/25
Mean		2014	673	2314	3040	1888		43.0		3.9	102	8/1

*PI306535 tested in 2012 only. Bread4, Neigel, PI538722, and Yaroslav tested in 2013 only.

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2013 KWS Hybrid Rye Regional Trial

Entry	Grain Yield (kg/h)						Test Wt (kg/hl)		Lodging Height	Head	Wint	Septoria	
	Sny	Ket	KgFy	OntCo	Mean	Rank	Mean	Rank	0-9 cm	Date	Surv.	0-9	
1 Guttino	5583	5307	3053	4363	4576	14	65.3	11	2.0	113	5/22	87	2.7
2 Gonello	5935	5804	3162	6359	5315	10	66.4	4	2.0	109	5/22	94	2.3
3 Bellami	7259	6302	2607	6842	5752	4	66.1	5	2.0	114	5/23	96	2.0
4 Palazzo	6673	6037	3285	6974	5742	6	65.6	9	2.0	121	5/22	97	3.0
5 KWS Magnifico	6350	5639	3904	7331	5806	3	67.3	3	2.3	119	5/22	93	1.7
6 Brasetto (180 k/m2)	6211	5326	3918	5706	5290	12	65.2	12	2.0	115	5/22	91	3.3
7 Brasetto (200 k/m2)	6728	6222	3683	6355	5747	5	65.3	10	2.0	115	5/22	96	2.3
8 Brasetto (250 k/m2)	6253	5890	4440	6665	5812	1	65.7	8	2.0	117	5/22	96	2.0
9 KWS-H 119	6607	5950	3286	6668	5628	7	65.9	7	2.0	118	5/22	94	2.3
10 KWS-H 120	6963	5237	4422	6609	5808	2	67.8	1	2.0	118	5/22	97	2.0
11 KWS-H 124	6003	5729	3802	6818	5588	8	66.0	6	2.0	119	5/23	78	2.3
12 KWS-H 131	5911	5078	3522	6726	5309	11	65.1	13	2.0	118	5/22	90	3.0
13 KWS-H 132	6310	6260	3280	6382	5558	9	63.9	15	2.0	113	5/22	92	2.7
14 KWS-H 134	5545	5721	2458	6613	5084	13	63.4	16	2.0	119	5/23	86	3.0
15 Aroostok (Local ck)	2024	2461	1687	2436	2152	16	65.1	14	7.7	132	5/20	83	3.7
16 Medina (wheat ck)	4037	4176	1351	4115	3420	15	67.3	2	6.0	107	5/30	99	5.3
Mean	5899	5446	3241	6060	5162		65.7		2.6	117	5/22	92	2.7
CV	10.2	9.1	18.9	9.3									

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