

Cornell University
Cooperative Extension

2013 New York Hybrid Corn Grain Performance Trials



Plant Breeding and Genetics 2014-1

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Cornell University
Cooperative Extension

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TO: Persons interested in the grain yield performance of corn hybrids in New York

This report includes a summary of our 2013 commercial hybrid corn grain trials. It shows results from eight locations in New York, divided into the following three maturity ranges:

	Base 50 Growing Degree Days	Relative Maturity
Early	1400-1900 GDD	70-90 Days
Medium Early	1900-2500 GDD	85-105 Days
Medium	2300-2700 GDD	100-115 Days

This report is designed to aid seed company representatives, corn growers, and extension educators in evaluating hybrids for yield capacity, stalk and root strength, and maturity in various regions in New York. It also provides information for developing ratings for the Cornell Guide for Integrated Field Crop Management.

While many hybrids included in this report are widely grown, others are new or experimental hybrids. In considering these tables, remember that this data represents only one year. Test results should be considered over several years before final conclusions are valid. Results gathered over several locations are a better guide than results at any one location.

We welcome comments or suggestions for improving this report for your use.

Sincerely yours,

A handwritten signature in blue ink that reads 'Margaret E. Smith'.

Margaret E. Smith
Department Extension Leader

For information on entering hybrids in the 2014 trials, please contact Judy Singer at jls10@cornell.edu or 607-255-5461 or Margaret Smith.

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Building Strong and Vibrant New York Communities

Cornell Cooperative Extension provides equal program and employment opportunities. NYS College of Agriculture and Life Sciences, NYS College of Human Ecology, and NYS College of Veterinary Medicine at Cornell University, Cooperative Extension associations, county governing bodies, and U.S. Department of Agriculture, cooperating.

2013 Growing Conditions

The 2013 growing season in New York tended to be a bit warmer and wetter than average. Most locations had warm conditions in May that allowed for timely planting. However, rainy conditions that began in the latter part of May dramatically delayed planting on any fields that were not already in at that time. June had above average precipitation in most areas of the state, with many areas showing twice the long-term average precipitation. Warm conditions in July helped move the crop along, and seasonable temperatures combined with plenty of rainfall in August helped establish good grain set and strong yield potential. September was very wet in northern New York, but otherwise tended to be on the dry side. A long warm fall with above average temperatures in October and unusually late first frost dates allowed the crop to mature fully and the grain to dry more in the field than is often the case. As a result, harvest moistures on our yield trials were lower than usual. State average yield was reported at 138 bu/acre – about 5 bu/acre more than reported New York averages for 2012, 2011, and 2009, but 12 bu/acre lower than the record 2010 state average.

Northern leaf blight was quite prevalent late in the growing season in many areas around the state, with disease pressure favored by the wet cool conditions in August and continuing disease development permitted by the long fall growing season. Gray leaf spot was common in misty valley areas of the southern tier and Hudson Valley, and was found at low levels in central New York locations.

Testing Procedures

Regional test locations for 2013 are shown on page –iii-. Tests were planted in 1/500 acre plots with three replications per location. All sites were machine planted and all except Chazy were combine harvested. Each plot's grain weight and grain moisture percentage was measured electronically on the combine. Grain yields were calculated in bu/acre at 15.5% moisture.

Yield Moisture Ratio

We have included a yield to moisture ratio (**Y/M Ratio**), which is the grain yield in bu/acre divided by the percentage grain moisture. Some breeders use this number as an estimate of hybrid efficiency. Hybrids that show high yields and earlier maturity (lower grain moistures) have higher Y/M ratios.

Stalk Lodging and Root Lodging

At harvest time, we counted the number of stalks broken (or lodged) below the ear. This number was expressed as a proportion of the total number of plants in the plot (**% Stalk Ldg**). We also counted plants

leaning over from the base at more than a 45° angle as root lodged, and then expressed this number as a proportion of the total number of plants in the plot (% **Root Ldg**).

Early Vigor, Staygreen, and Leaf Disease Ratings

Data were collected on these traits at those locations where expression was uniform across the field and, for diseases, where disease pressure was sufficient to rate. **Early Vigor** was evaluated at knee-high stage or a bit earlier, with 5 = excellent vigor and 1 = very poor vigor. Stay green (**Stay Grn**) is a measure of how much green leaf area remains on plants in September; 5 = completely dry plants and 1 = completely green plants. Gray leaf spot (**GLS**, caused by *Cercospora zea-maydis*) and northern leaf blight (**NLB**, caused by *Setosphaeria turcica*) each were prevalent at several sites, and severity was rated with 5 = completely susceptible (plant dead due to disease) and 0 = no disease apparent. Where several diseases were present and could not be easily distinguished, plant health overall was rated (**Plt Hlth**) using the same scale.

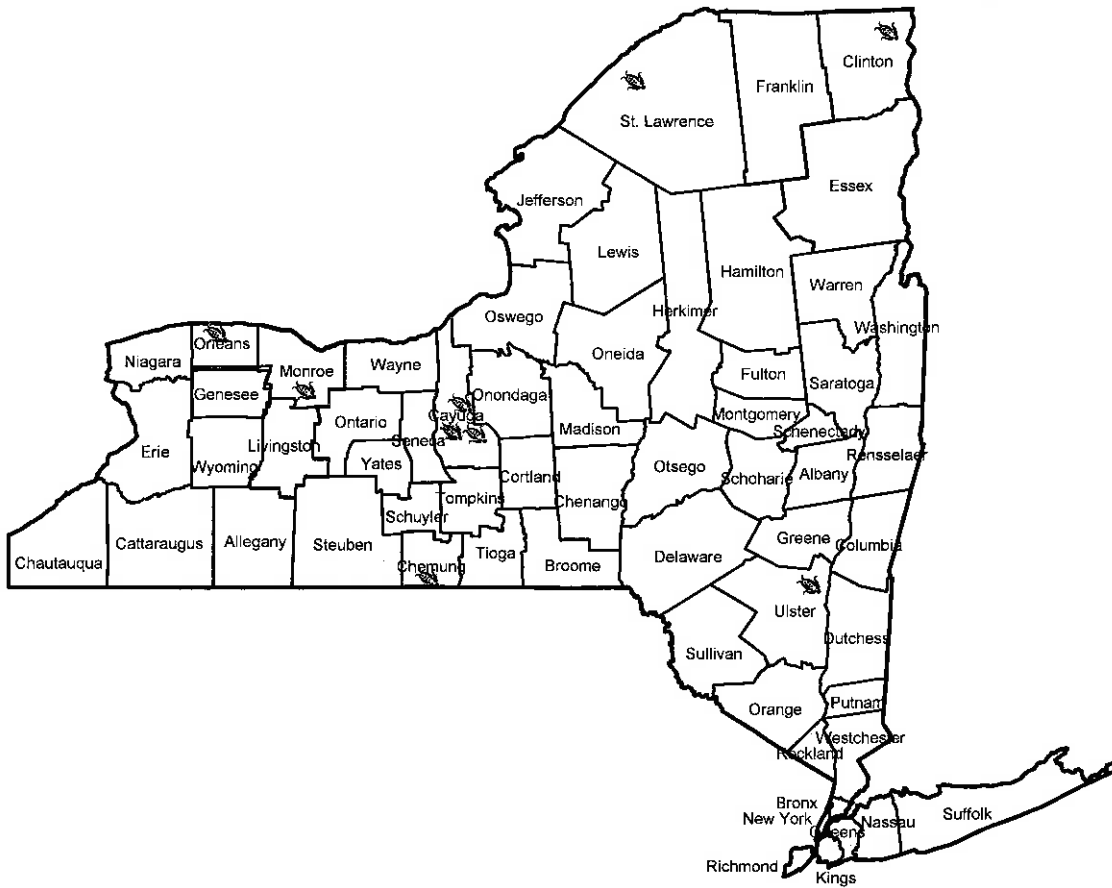
CV, LSD, SD

We use three statistics to evaluate the quality of the data from these experiments. The coefficient of variation (**CV**) is a measure of the amount of uncontrolled variability due to differences in the soil, weather, fertility, etc. Grain yield CVs below 12 are excellent; those around 15 are acceptable. The least significant difference (**LSD**) is computed at the 5% level of probability. This indicates that if a difference between two hybrids is larger than the listed LSD, then the odds are at least 95 to 5 (or 19 to 1) that there is true varietal difference between the hybrids, or, as the statisticians say, the difference between the two hybrids is "significant." Farmers who need businessmen's odds more than statistical precision may consider a 10 bu/acre grain yield difference sufficient to guide a decision in choice of hybrid. The standard deviation (**SD**) is the measure used to determine whether the differences between two hybrids are large enough, given the precision of that experiment, to be significant and probably due to true differences between the hybrids.

**NOTE: TABLES IN THIS PUBLICATION SHOULD NOT BE REPRODUCED
IF ANY PORTION IS OMITTED OR IF ORDER OF DATA IS CHANGED.**

*The information given herein is supplied with the understanding that no
discrimination is intended and no endorsement by Cornell Cooperative Extension is implied.*

2013 Trial Locations



**2013
Cooperators**

Early Grain Series

County	Cornell Cooperative Extension Local Contact	Cooperator	Location
Orleans	Mike Stanyard	Hugh Dudley	Albion
Clinton	Peter Hagar	Mike Davis	Chazy
Cayuga	Keith Severson	Steve Nemec	New Hope
St. Lawrence	Brent Buchanan	Jon Greenwood	Madrid

Medium Early Grain Series

County	Cornell Cooperative Extension Local Contact	Cooperator	Location
Orleans	Mike Stanyard	Hugh Dudley	Albion
Chemung	Janice Degni	Dudley French	Chemung
Cayuga	Keith Severson	Willet Dairy	Lansing
Cayuga	Keith Severson	Steve Nemec	New Hope
St. Lawrence	Brent Buchanan	Jon Greenwood	Madrid

Medium Grain Series

County	Cornell Cooperative Extension Local Contact	Cooperator	Location
Cayuga	Keith Severson	Paul Stachowski	Aurora
Chemung	Janice Degni	Dudley French	Chemung
Ulster	Teresa Rusinek	Joe Hasbrouck	Kingston
Monroe	Mike Stanyard	Mark Greene	Pittsford

**2013
Participating Companies**

Company/Brand	Contact for Information	Address & Phone
Albert Lea Seed Viking Brand	Matt Leavitt matt@alseed.com	1414 W. Main, PO Box 127 Albert Lea, MN 56007 Phone: 800-352-5247 Fax: 507-373-7032
Crop Production Services Dyna-Gro Brand	Tom Barber tom.barber@cpsagu.com	1140 Sweet Road East Aurora, NY 14052 Phone: 716-912-5494 Fax: 716-652-1614
Doebler's PA Hybrids, Inc. Doebler's® RPM®	Doug Messersmith dmesser@doeblers.com	202 Tiadaghton Avenue Jersey Shore, PA 17740 Phone: 570-753-3210 Fax: 570-753-5302
FS InVISION	Mark Guttendorf mguttendorf@growmarkfs.com	308 N.E. Front Street Milford, DE 19963 Phone: 607-842-6330/315-427-3558
T. A. Seeds	Taylor Doebler III taylor@taseeds.com	PO Box 300 Avis, PA 17721 Phone: 866-813-SEED (7333) Fax: 570-753-4445

**Table 1. 2013 Early Maturity Hybrids Trial Summary
(Madrid, Albion, New Hope)**

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn*
RPM®	217AMX-R™	175	18.2	9.7	6	2	3.7	2.8
RPM®	248HXR™	183	18.7	9.8	3	5	3.7	2.7
RPM®	278HXR™	210	19.1	11.1	1	6	3.7	1.7
FS InVISION	FS 37R22VT3P	226	19.2	11.8	1	1	2.7	0.8
FS InVISION	FS 40R27VT3P	202	19.3	10.5	1	0	2.6	1.3
Doebblers®	287GRQ™	215	19.3	11.3	2	6	3.6	1.8
FS InVISION	FS 38R08SS	219	20.1	11.0	3	1	2.9	1.1
FS InVISION	FS 4212VT3P	224	20.3	11.1	0	0	3.1	1.2
FS InVISION	FS 40R30SS	212	21.2	10.1	1	1	2.9	1.1
	MEAN	207	19.5	10.7	2	2	3.2	1.6
	S.D.	18	0.7					
	C.V.	9	3.6					
	LSD(.05)	17	0.7					

* 2 location data

Table 2. 2013 Early Maturity Hybrids, Madrid, St. Lawrence County, Northern NY

Brand	Hybrid	Yield Bu/A	%		Stalk Ldg	Root Ldg	Early Vigor	Stay Grn	Plant Health	Planted: May 6 2013	Harvested: Nov 8 2013		
			Mois ture	Y/M Ratio								2013	Ave.
RPM®	217AMX-R™	176	19.5	9.0	7	3	3.5	2.8	3.2	86/50			
RPM®	248HXR™	190	19.7	9.7	6	3	5.0	2.3	3.2	Growing	Rainfall		
FS InVISION	FS 37R22VT3P	222	19.9	11.1	1	2	4.2	0.5	1.5	Degree Days (Inches)			
Doebblers®	287GRQ™	209	20.3	10.3	3	8	4.2	1.3	2.5			2013	Ave.
FS InVISION	FS 38R08SS	210	20.9	10.0	8	2	4.2	1.0	2.2	May		351	308
FS InVISION	FS 40R27VT3P	213	21.1	10.1	1	1	4.3	1.2	2.2	June		441	482
FS InVISION	FS 4212VT3P	233	21.1	11.0	1	0	3.9	0.7	0.8	July		667	649
RPM®	278HXR™	207	21.2	9.8	1	11	4.7	1.0	2.0	Aug		565	581
FS InVISION	FS 40R30SS	209	22.5	9.3	2	1	3.8	0.7	1.5	Sept		330	354
										Oct		204	154
	MEAN	208	20.7	10.0	3	3	4.2	1.3	2.1				
	S.D.	15	0.6							Total		2558	2527
	C.V.	7	3.1							% Norm		101	131.9
	LSD(.05)	26	1.1							Departure		32	6.6

Table 3. 2013 Early Maturity Hybrids, Albion, Orleans County, Western NY

Brand	Hybrid	Yield Bu/A	%		Stalk Ldg	Root Ldg	Early Vigor	Stay Grn	Planted: May 16 2013	Harvested: Nov 21 2013		
			Mois ture	Y/M Ratio							2013	Ave.
RPM®	217AMX-R™	187	16.9	11.1	6	4	4.5	2.8	86/50			
RPM®	278HXR™	214	16.9	12.7	2	8	4.8	2.3	Growing	Rainfall		
Doebblers®	287GRQ™	241	17.1	14.1	3	9	4.8	2.3	Degree Days (Inches)			
RPM®	248HXR™	164	17.1	9.6	1	5	4.0	3.0			2013	Ave.
FS InVISION	FS 37R22VT3P	225	17.4	12.9	1	0	3.2	1.2	May		410	334
FS InVISION	FS 40R27VT3P	199	17.4	11.4	0	0	2.5	1.4	June		486	524
FS InVISION	FS 38R08SS	221	18.0	12.4	2	1	3.8	1.2	July		713	665
FS InVISION	FS 4212VT3P	224	18.2	12.4	0	0	3.8	1.8	Aug		599	622
FS InVISION	FS 40R30SS	203	18.3	11.2	0	1	3.2	1.5	Sept		398	420
									Oct		245	197
	MEAN	209	17.5	12.0	2	3	3.8	1.9				
	S.D.	18	0.5						Total		2851	2761
	C.V.	9	2.6						% Norm		103	112
	LSD(.05)	32	0.8						Departure		90	2.2

Table 4. 2013 Early Maturity Hybrids, New Hope, Cayuga County, Central NY

Brand	Hybrid	Yield Bu/A	%		Stalk Ldg	Root Ldg	Early Vigor	NLB	Planted: May 9 2013	Harvested: Nov 13 2013		
			Mois ture	Y/M Ratio							2013	Ave.
RPM®	217AMX-R™	161	18.3	8.8	6	1	3.2	2.5	86/50			
RPM®	278HXR™	208	19.2	10.8	1	1	1.7	2.7	Growing	Rainfall		
RPM®	248HXR™	195	19.3	10.1	1	6	2.0	1.8	Degree Days (Inches)			
FS InVISION	FS 40R27VT3P	194	19.3	10.0	1	0	1.0	1.3			2013	Ave.
FS InVISION	FS 37R22VT3P	232	20.3	11.4	1	1	0.7	1.0	May		356	267
Doebblers®	287GRQ™	195	20.5	9.5	1	2	1.8	2.7	June		456	446
FS InVISION	FS 38R08SS	226	21.3	10.6	1	0	0.7	2.0	July		677	574
FS InVISION	FS 4212VT3P	215	21.7	9.9	0	0	1.7	1.2	Aug		521	535
FS InVISION	FS 40R30SS	225	22.8	9.9	1	0	1.8	2.3	Sept		338	337
									Oct		205	138
	MEAN	206	20.3	10.1	1	1	1.6	1.9				
	S.D.	22	1.0						Total		2551	2297
	C.V.	10	5.0						% Norm		111	127.0
	LSD(.05)	37	1.7						Departure		254	6.4

**Table 5. 2013 Medium Early Maturity Hybrids Trial Summary
(Lansing, New Hope, Madrid, Chemung, Albion)**

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor*	Stay Grn*
Viking	70-90N	218	18.9	11.6	2	1	4.0	2.9
Viking	60-85N	203	19.4	10.5	2	3	4.4	2.8
Doebblers®	327GRB™	223	19.5	11.5	2	4	3.7	2.7
T A Seeds	TA333-28	216	20.1	10.9	0	1	3.6	2.1
T A Seeds	TA290-33	232	20.1	11.6	0	1	4.7	2.6
Dyna-Gro	CX32VP56	217	20.1	10.9	0	0	4.3	2.7
RPM®	428AMX™	236	20.2	11.8	2	0	4.6	2.5
FS InVISION	FS 44R22VT3P	233	20.3	11.7	2	0	4.2	2.0
T A Seeds	TA264-28	216	20.3	10.8	0	0	3.8	2.4
Dyna-Gro	D39VP14	223	20.6	11.0	1	0	4.5	2.5
RPM®	449HRQ™	212	20.6	10.5	1	1	3.4	2.1
T A Seeds	TA484-28	219	20.7	10.8	0	0	4.3	2.5
Dyna-Gro	D34VP52	221	20.9	10.7	0	0	4.3	2.3
FS InVISION	FS 46R26SS	232	20.9	11.3	1	0	4.0	2.4
Viking	51-95N	210	21.0	10.2	0	0	3.8	2.3
Dyna-Gro	D38SS50	232	21.1	11.2	0	0	4.7	2.3
Viking	58-98N	241	21.2	11.6	1	1	4.5	2.4
FS InVISION	FS 5232VT3P	225	21.5	10.7	0	0	3.6	2.0
RPM®	498HXR™	229	21.5	10.8	2	1	4.5	2.2
Doebblers®	455GRV™	236	21.7	11.0	9	5	3.8	2.0
FS InVISION	FS 55R25VT3P	251	23.0	11.2	2	0	4.3	2.1
	MEAN	225	20.6	11.1	1.3	0.9	4.2	2.4
	S.D.	22	1.1					
	C.V.	10	5.2					
	LSD(.05)	15	0.8					

* 4 location data

Table 6. 2013 Medium Early Maturity Hybrids, Lansing, Cayuga County, Central NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	NLB	Planted:	Harvested:			
										May 10 2013	Oct 29 2013			
Viking	60-85N	187	19.0	9.9	1	4	4.0	5.0	4.3	86/50				
Doeblers®	327GRB™	208	19.1	10.9	1	4	4.0	5.0	3.8	Growing	Rainfall			
Viking	70-90N	213	19.4	11.0	1	0	4.5	5.0	3.7	Degree Days (Inches)				
FS InVISION	FS 44R22VT3P	215	20.0	10.8	3	1	4.2	4.3	2.7	2013	Ave.	2013	Ave.	
RPM®	428AMX™	234	20.8	11.3	3	0	5.0	4.2	3.3	May	383	315	3.6	3.2
T A Seeds	TA333-28	233	20.9	11.2	0	0	3.7	4.0	1.7	June	478	498	6.4	3.8
T A Seeds	TA290-33	234	21.0	11.1	0	0	5.0	5.0	3.7	July	674	632	3.2	3.5
RPM®	449HRQ™	208	21.4	9.8	1	1	3.7	4.8	3.7	Aug	526	591	6.0	3.2
Dyna-Gro	CX32VP56	228	21.6	10.6	0	0	3.8	5.0	2.5	Sept	353	398	4.0	4.0
T A Seeds	TA484-28	238	21.6	11.1	0	0	4.8	4.8	3.5	Oct	224	179	3.1	3.4
T A Seeds	TA264-28	234	21.9	10.8	0	1	4.0	4.2	1.7					
Doeblers®	455GRV™	255	22.0	11.7	3	11	3.8	4.8	4.0	Total	2638	2613	26.3	21.0
Dyna-Gro	D38SS50	226	22.0	10.3	1	1	4.7	5.0	3.0	% Norm	101		124.9	
Viking	51-95N	203	22.5	9.0	0	0	3.8	4.3	3.0	Departure	25		5.2	
Dyna-Gro	D34VP52	225	22.6	10.0	0	0	4.2	4.5	2.8					
FS InVISION	FS 46R26SS	217	22.6	9.6	2	0	4.2	4.3	1.8					
RPM®	498HXR™	248	22.7	11.0	0	2	4.8	3.7	1.2					
Dyna-Gro	D39VP14	224	22.8	9.8	0	0	4.8	4.5	3.0					
Viking	58-98N	244	23.0	10.6	1	0	4.7	4.7	2.5					
FS InVISION	FS 5232VT3P	226	23.0	9.8	1	0	3.7	3.7	2.8					
FS InVISION	FS 55R25VT3P	270	23.9	11.3	0	0	4.3	3.8	2.7					
	MEAN	227	21.6	10.5	0.7	1.1	4.3	4.5	2.9					
	S.D.	17	1.3											
	C.V.	7	6.0											
	LSD(.05)	28	2.2											

Table 7. 2013 Medium Early Maturity Hybrids, New Hope, Cayuga County, Central NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Planted:	Harvested:			
							May 9 2013	Nov 13 2013			
Viking	70-90N	195	19.9	9.9	5	0	86/50				
Viking	60-85N	206	20.6	10.0	3	3	Growing	Rainfall			
Dyna-Gro	CX32VP56	205	20.9	9.8	0	0	Degree Days (Inches)				
Doeblers®	327GRB™	236	21.0	11.2	3	7	2013	Ave.	2013	Ave.	
RPM®	428AMX™	234	21.5	10.9	2	1	May	356	267	4.5	3.6
T A Seeds	TA264-28	212	21.7	9.9	0	0	June	456	446	6.1	4.3
T A Seeds	TA290-33	222	22.1	10.1	0	1	July	677	574	6.6	4.0
Viking	51-95N	218	22.3	9.9	0	0	Aug	521	535	4.5	3.8
Dyna-Gro	D39VP14	216	22.4	9.7	0	0	Sept	338	337	5.5	4.2
Dyna-Gro	D34VP52	218	22.6	9.7	0	0	Oct	205	138	3.1	4.0
Dyna-Gro	D38SS50	235	22.8	10.3	0	0					
T A Seeds	TA333-28	227	23.1	9.8	0	1	Total	2551	2297	30.3	23.9
FS InVISION	FS 46R26SS	252	23.2	10.9	0	0	% Norm	111		127.0	
T A Seeds	TA484-28	210	23.4	9.0	0	0	Departure	254		6.4	
FS InVISION	FS 5232VT3P	218	23.6	9.3	0	2					
FS InVISION	FS 44R22VT3P	251	23.7	10.8	1	1					
Viking	58-98N	223	23.8	9.4	1	1					
RPM®	449HRQ™	204	23.8	8.6	0	2					
Doeblers®	455GRV™	241	24.3	9.9	2	10					
RPM®	498HXR™	241	24.5	9.9	3	1					
FS InVISION	FS 55R25VT3P	246	24.5	10.1	0	1					
	MEAN	224	22.7	9.9	0.9	1.3					
	S.D.	17	1.6								
	C.V.	7	7.1								
	LSD(.05)	27	2.7								

Table 8. 2013 Medium Early Maturity Hybrids, Madrid, St. Lawrence County, Northern NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	Plant Health		Planted:		Harvested:	
											May 6 2013	Nov 8 2013		
Viking	70-90N	240	20.7	11.6	1	2	3.7	1.2	1.3		86/50			
T A Seeds	TA290-33	252	21.3	11.8	2	6	4.8	1.0	1.2		Growing Rainfall			
T A Seeds	TA333-28	172	21.5	8.0	0	1	3.0	1.0	1.7		Degree Days (Inches)			
Dyna-Gro	D39VP14	220	21.8	10.1	2	0	4.3	1.2	1.0		2013	Ave.	2013	Ave.
FS InVISION	FS 44R22VT3P	229	22.1	10.4	2	0	4.7	1.0	1.3	May	351	308	2.4	3.0
Doeblers®	327GRB™	245	22.2	11.0	2	3	3.5	1.3	2.0	June	441	482	6.3	3.5
T A Seeds	TA264-28	192	22.3	8.6	1	0	3.2	1.2	1.7	July	667	649	3.6	3.4
Viking	60-85N	216	22.5	9.7	1	7	4.6	0.8	1.7	Aug	565	581	4.4	3.6
RPM®	449HRQ™	223	22.6	9.9	3	2	3.0	0.7	0.8	Sept	330	354	6.7	3.6
Dyna-Gro	D32VP56	217	22.7	9.6	1	0	4.7	1.2	2.0	Oct	204	154	4.1	3.6
T A Seeds	TA484-28	189	22.7	8.4	0	0	3.8	1.3	1.3					
RPM®	428AMX™	240	22.8	10.5	3	1	4.7	1.2	1.5	Total	2558	2527	27.3	20.7
Dyna-Gro	D34VP52	211	22.9	9.2	0	1	4.5	1.2	1.3	% Norm	101		131.9	
Viking	58-98N	245	23.3	10.5	3	2	4.5	1.0	1.3	Departure	32		6.6	
FS InVISION	FS 46R26SS	212	23.5	9.0	1	0	4.0	1.0	1.2					
Dyna-Gro	D38SS50	220	23.5	9.4	0	0	4.7	1.0	1.7					
Viking	51-95N	200	23.7	8.4	1	0	3.7	0.8	0.8					
RPM®	498HXR™	232	23.8	9.8	6	1	4.5	1.2	0.8					
FS InVISION	FS 5232VT3P	221	24.5	9.0	0	0	3.7	0.8	1.8					
Doeblers®	455GRV™	232	25.2	9.2	28	4	3.2	0.8	1.7					
FS InVISION	FS 55R25VT3P	224	27.2	8.3	7	1	4.7	1.2	1.3					
	MEAN	220	23.0	9.6	3.0	1.4	4.1	1.0	1.4					
	S.D.	19	1.0											
	C.V.	9	4.2											
	LSD(.05)	32	1.6											

Table 9. 2013 Medium Early Maturity Hybrids, Chemung, Chemung County, Southern Tier NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	GLS		Planted:		Harvested:	
											May 7 2013	Nov 14-15 2013		
RPM®	449HRQ™	212	17.6	12.1	0	0	3.7	1.5	3.2		86/50			
Viking	70-90N	232	17.7	13.1	1	0	4.3	2.3	4.3		Growing Rainfall			
Viking	51-95N	228	17.7	12.9	0	1	4.0	2.0	3.8		Degree Days (Inches)			
T A Seeds	TA333-28	221	17.8	12.4	0	0	4.0	1.3	3.3		2013	Ave.	2013	Ave.
Dyna-Gro	D34VP52	224	17.8	12.6	0	0	4.7	2.0	3.7	May	367	350	3.3	3.1
FS InVISION	FS 46R26SS	252	17.8	14.2	0	0	4.5	2.0	3.5	June	478	535	4.6	4.1
Doeblers®	327GRB™	230	17.9	12.9	1	0	4.0	1.8	4.0	July	678	639	2.9	3.6
T A Seeds	TA264-28	242	17.9	13.5	0	0	4.5	2.0	3.3	Aug	562	619	2.8	3.4
FS InVISION	FS 5232VT3P	258	17.9	14.4	0	0	3.5	1.5	3.5	Sept	393	421	1.7	3.6
FS InVISION	FS 44R22VT3P	256	17.9	14.3	0	0	4.3	1.3	3.3	Oct	259	174	2.2	3.2
Dyna-Gro	D32VP56	238	18.0	13.2	0	0	4.7	2.0	3.7					
Viking	60-85N	217	18.0	12.0	1	1	4.7	2.2	4.0	Total	2737	2737	17.4	20.9
RPM®	428AMX™	258	18.1	14.2	2	0	4.7	2.0	3.5	% Norm	100		83.2	
Viking	58-98N	247	18.1	13.7	0	0	4.3	1.7	3.3	Departure	1		-3.5	
T A Seeds	TA484-28	239	18.2	13.2	0	0	4.7	1.8	3.3					
Dyna-Gro	D39VP14	231	18.4	12.6	1	0	4.3	2.2	3.5					
RPM®	498HXR™	216	18.4	11.8	0	0	5.0	1.8	4.3					
Dyna-Gro	D38SS50	237	18.4	12.9	1	0	4.7	1.8	3.5					
T A Seeds	TA290-33	239	18.5	13.0	0	0	4.8	1.8	3.5					
Doeblers®	455GRV™	238	18.8	12.6	3	0	4.2	1.3	3.3					
FS InVISION	FS 55R25VT3P	263	19.3	13.6	1	0	4.7	1.7	3.0					
	MEAN	237	18.1	13.1	0.4	0.1	4.4	1.8	3.6					
	S.D.	25	0.4											
	C.V.	11	2.3											
	LSD(.05)	41	0.7											

Table 10. 2013 Medium Early Maturity Hybrids, Albion, Orleans County, Western NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	Planted:		Harvested:		
									May 16 2013	86/50 Growing Degree Days	Nov 21 2013	Rainfall (Inches)	
									2013	Ave.	2013	Ave.	
Viking	70-90N	211	16.8	12.6	2	3	3.4	3.1	May	410	334	2.6	3.0
Viking	60-85N	190	17.1	11.1	2	0	4.3	3.0	June	486	524	6.0	3.0
Doebler's®	327GRB™	197	17.1	11.5	2	3	3.3	2.7	July	713	665	2.2	3.1
T A Seeds	TA333-28	228	17.2	13.2	1	1	3.6	2.2	Aug	599	622	3.0	3.1
Dyna-Gro	D32VP56	196	17.5	11.2	0	0	4.0	2.5	Sept	398	420	3.8	3.6
RPM®	449HRQ™	212	17.5	12.1	1	0	3.3	1.5	Oct	245	197	3.5	3.1
Dyna-Gro	D39VP14	223	17.6	12.7	0	0	4.7	2.2	Total	2851	2761	21.1	18.8
T A Seeds	TA484-28	217	17.6	12.4	1	0	3.8	1.8	% Norm	103		112	
T A Seeds	TA264-28	200	17.7	11.4	0	0	3.6	2.2	Departure	90		2.2	
FS InVISION	FS 46R26SS	225	17.7	12.8	1	0	3.3	2.3					
T A Seeds	TA290-33	215	17.7	12.1	0	1	4.2	2.5					
FS InVISION	FS 44R22VT3P	215	17.7	12.1	4	0	3.7	1.5					
RPM®	428AMX™	214	17.8	12.1	2	0	4.2	2.5					
Viking	58-98N	249	17.9	13.9	3	1	4.7	2.2					
Doebler's®	455GRV™	216	18.2	11.9	7	1	4.2	1.0					
FS InVISION	FS 5232VT3P	200	18.3	10.9	0	0	3.5	1.8					
RPM®	498HXR™	210	18.3	11.5	4	0	3.8	2.0					
Dyna-Gro	D38SS50	243	18.5	13.2	0	0	4.8	1.5					
Viking	51-95N	199	18.7	10.7	1	0	3.7	2.2					
Dyna-Gro	D34VP52	229	18.7	12.2	0	0	4.0	1.5					
FS InVISION	FS 55R25VT3P	253	20.1	12.6	2	1	3.7	1.8					
	MEAN	216	17.9	12.1	1.6	0.5	3.9	2.1					
	S.D.	29	0.6										
	C.V.	13	3.4										
	LSD(.05)	47	1.0										

**Table 11. 2013 Medium Maturity Hybrids Trial Summary
(Kingston, Chemung, Aurora, Pittsford)**

Brand	Hybrid	Yield Bu/A	%	Y/M Ratio	%	%	Early Vigor	Stay Grn
			Mois ture		Stalk Ldg	Root Ldg		
T A Seeds	TA 544-28	213	19.0	11.2	0	0	4.9	2.1
T A Seeds	TA 545-20	231	19.2	12.1	0	0	4.8	2.0
T A Seeds	TA 514-28	200	19.3	10.3	0	0	3.9	2.0
Doebler's®	554GRQ™	231	19.4	11.9	1	0	4.8	2.1
Dyna-Gro	D42SS42	211	19.5	10.8	1	0	4.6	2.0
Dyna-Gro	D47SS23	218	19.5	11.2	0	0	4.1	2.3
RPM®	537AMX™	218	20.1	10.9	1	0	4.1	2.0
RPM®	604HRQ™	220	20.4	10.9	0	0	4.1	2.2
T A Seeds	TA 565-20	214	20.7	10.3	1	0	4.5	1.8
RPM®	589AMXT™	240	20.8	11.5	0	0	4.4	1.8
T A Seeds	TA 583-28	242	20.8	11.7	0	0	4.9	2.0
T A Seeds	TA 683-13VP	240	21.2	11.3	1	0	4.9	1.9
	MEAN	223	20.0	11.2	0	0	4.5	2.0
	S.D.	17	0.8					
	C.V.	8	3.8					
	LSD(.05)	14	0.6					

Table 12. 2013 Medium Maturity Hybrids, Kingston, Ulster County, Hudson Valley NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	Plant Health	Planted:		Harvested:		
										May 13 2013	Nov 6 2013	2013	Ave.	2013
T A Seeds	TA 545-20	259	18.5	14.0	0	1	4.8	2.2	3.8		86/50			
T A Seeds	TA 544-28	237	18.9	12.5	0	0	4.8	2.2	3.5		Growing	Rainfall		
Doebblers®	554GRQ™	254	19.0	13.4	1	1	4.3	2.3	3.8		Degree Days (Inches)			
Dyna-Gro	D47SS23	207	19.1	10.9	0	0	3.8	2.3	3.3		2013	Ave.	2013	Ave.
T A Seeds	TA 514-28	216	19.2	11.3	0	0	3.8	2.3	3.0	May	371	347	2.5	4.0
RPM®	604HRQ™	263	19.3	13.6	0	0	4.3	1.8	2.5	June	551	511	5.9	4.0
RPM®	537AMX™	259	19.6	13.3	0	0	4.3	2.0	3.5	July	802	610	3.1	4.4
Dyna-Gro	D42SS42	249	19.7	12.7	0	0	5.3	2.0	3.3	Aug	387	580	5.9	4.1
T A Seeds	TA 583-28	283	20.2	14.0	0	0	4.8	2.0	2.7	Sept	306	414	2.3	4.1
T A Seeds	TA 565-20	243	20.3	12.0	0	0	4.4	1.8	3.3	Oct	236	225	2.2	4.5
RPM®	589AMXT™	289	20.7	14.0	0	0	4.5	1.5	3.3					
T A Seeds	TA 683-13VP	276	21.0	13.2	0	0	4.8	1.8	3.8	Total	2653	2687	21.9	25.1
										% Norm	99		87.5	
										Departure	-34		-3.1	
	MEAN	253	19.6	12.9	0	0	4.5	2.0	3.3					
	S.D.	10	0.4											
	C.V.	4	2.0											
	LSD(.05)	17	0.7											

Table 13. 2013 Medium Maturity Hybrids, Chemung, Chemung County, Southern Tier NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	GLS	Planted:		Harvested:		
										May 7 2013	Nov 14-15 2013	2013	Ave.	2013
T A Seeds	TA 544-28	241	19.2	12.5	0	0	5.0	1.7	4.0		86/50			
T A Seeds	TA 545-20	276	19.6	14.0	0	1	5.0	1.3	3.3		Growing	Rainfall		
T A Seeds	TA 514-28	231	19.8	11.7	0	0	4.0	1.5	3.3		Degree Days (Inches)			
RPM®	537AMX™	260	20.2	12.9	0	0	4.0	1.7	4.0		2013	Ave.	2013	Ave.
Dyna-Gro	D47SS23	277	20.3	13.7	1	0	4.3	1.7	3.7	May	367	350	3.3	3.1
Doebblers®	554GRQ™	288	20.6	14.0	0	1	5.0	1.5	3.8	June	478	535	4.6	4.1
RPM®	604HRQ™	273	20.6	13.3	0	0	4.2	1.5	3.5	July	678	639	2.9	3.6
Dyna-Gro	D42SS42	253	20.8	12.2	0	0	4.2	1.3	3.2	Aug	562	619	2.8	3.4
T A Seeds	TA 583-28	276	20.9	13.3	1	0	5.0	1.5	3.7	Sept	393	421	1.7	3.6
T A Seeds	TA 565-20	259	21.3	12.2	0	0	5.0	1.3	3.3	Oct	259	174	2.2	3.2
RPM®	589AMXT™	298	21.4	13.9	0	1	4.3	1.3	4.0					
T A Seeds	TA 683-13VP	302	22.4	13.5	0	0	5.0	1.5	3.5	Total	2737	2737	17.4	20.9
										% Norm	100		83.2	
										Departure	1		-3.5	
	MEAN	269	20.6	13.1	0	0	4.6	1.5	3.6					
	S.D.	18	0.6											
	C.V.	7	2.9											
	LSD(.05)	31	1.0											

Table 14. 2013 Medium Maturity Hybrids, Aurora, Cayuga County, Central NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	NLB	Planted:	Harvested:			
										May 20 2013	Nov 16 2013			
Doeblers®	554GRQ™	202	18.8	10.7	1	0	5.0	2.3	4.5	86/50				
T A Seeds	TA 544-28	195	18.9	10.4	0	0	4.8	2.3	4.2	Growing	Rainfall			
Dyna-Gro	D42SS42	174	19.0	9.2	0	0	4.5	2.3	4.2	Degree Days (Inches)				
Dyna-Gro	D47SS23	183	19.3	9.5	0	0	4.2	2.8	3.8	2013	Ave.	2013	Ave.	
T A Seeds	TA 514-28	173	19.4	8.9	0	0	4.3	2.2	4.2	May	383	315	3.6	3.2
T A Seeds	TA 545-20	195	19.4	10.0	0	0	4.8	2.2	4.5	June	478	498	6.4	3.8
RPM®	589AMXT™	195	20.1	9.7	0	0	4.3	2.5	4.0	July	674	632	3.2	3.5
T A Seeds	TA 565-20	196	20.1	9.7	1	0	4.8	1.7	3.7	Aug	526	591	6.0	3.2
RPM®	537AMX™	182	20.4	8.9	0	0	4.5	1.8	4.2	Sept	353	398	4.0	4.0
T A Seeds	TA 683-13VP	194	21.0	9.3	2	0	5.0	2.0	4.5	Oct	224	179	3.1	3.4
RPM®	604HRQ™	184	21.0	8.8	0	0	4.8	2.8	3.8					
T A Seeds	TA 583-28	205	21.9	9.4	0	0	4.7	1.5	3.7	Total	2638	2613	26.3	21.0
										% Norm	101		124.9	
	MEAN	190	20.0	9.5	0	0	4.6	2.2	4.1	Departure	25		5.2	
	S.D.	16	0.8											
	C.V.	8	3.9											
	LSD(.05)	27	1.3											

Table 15. 2013 Medium Maturity Hybrids, Pittsford, Monroe County, Western NY

Brand	Hybrid	Yield Bu/A	% Mois ture	Y/M Ratio	% Stalk Ldg	% Root Ldg	Early Vigor	Stay Grn	Planted:	Harvested:			
									May 17 2013	Nov 20 2013			
Dyna-Gro	D42SS42	168	18.5	9.1	2	0	4.5	2.2	86/50				
T A Seeds	TA 514-28	179	18.8	9.5	1	0	3.5	2.2	Growing	Rainfall			
T A Seeds	TA 544-28	178	18.9	9.4	1	0	5.0	2.2	Degree Days (Inches)				
T A Seeds	TA 545-20	193	19.2	10.2	1	0	4.8	2.5	2013	Ave.	2013	Ave.	
Dyna-Gro	D47SS23	204	19.3	10.6	1	0	4.2	2.3	May	414	323	4.0	2.9
Doeblers®	554GRQ™	182	19.5	9.4	1	0	5.0	2.3	June	499	508	6.3	3.3
RPM®	537AMX™	170	20.2	8.6	3	0	3.8	2.3	July	702	653	4.4	3.3
T A Seeds	TA 583-28	206	20.3	10.1	1	0	5.0	3.0	Aug	606	605	2.7	3.5
T A Seeds	TA 683-13VP	189	20.4	9.3	2	0	4.7	2.2	Sept	379	394	2.4	3.4
RPM®	604HRQ™	159	20.7	7.8	1	0	3.3	2.7	Oct	237	185	3.3	2.7
RPM®	589AMXT™	176	20.9	8.5	1	0	4.5	2.0					
T A Seeds	TA 565-20	158	21.1	7.5	3	0	3.7	2.3	Total	2837	2668	23.1	19.1
									% Norm	106		120.7	
	MEAN	180	19.8	9.2	1	0	4.3	2.3	Departure	169		4.0	
	S.D.	24	1.1										
	C.V.	13	5.7										
	LSD(.05)	41	1.9										