

# **NEW YORK FORAGE LEGUME AND GRASS VARIETY YIELD TRIALS -2010**

## **HARVEST AND TOTAL SEASON SUMMARY**

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<http://plbrgen.cals.cornell.edu/cals/pbg/programs/departamental/forage/foragetest.cfm>

Forage yield trials are planted and harvested annually by Cornell University. Each year trials are planted at Ithaca and at another location in New York State. Trials are managed for four years; seeding year and three production years.

The plot size seeded is 3.5 ft. by 20 ft. and the plot size harvested is 3.5 ft. by 13 ft. Soil fertility is maintained at high levels by fertilizing prior to planting with 300 lb/A of 10-20-20 and by fall fertilizing each year with 300 lb/A 0-15-30. Every field area is fenced with 3 strand electric fence to exclude deer from early spring to late fall.

### **Alfalfa (pg. 3-12):**

Below is a table of trial location, year of establishment, soil series, and elevation.

<b>Trial, Seeding Year</b>	<b>Soil series, elevation, # of harvests in 2010</b>
Ithaca, 2007, Page 5	Williamson silt loam, 1000 ft., 3 harvests
Warsaw, 2007, Page 4	Bath-Valois gravelly loam, 1700 ft., 4 harvests
Ithaca, 2008, Page 7	Erie silt loam, 1000 ft., 3 harvests
Chazy, 2008, Page 6	Raynham variant silt loam, 185 ft., 3 harvests
Ithaca, 2009, Page 9	Madalin silt loam, 990 ft, 3 harvests
Cobleskill, 2009 Pg.8	Barbour Tioga f. sandy loam, 1170 ft., 4 har.
Ithaca, 2010, Page 10	Williamson silt loam, 1000 ft., 2 harvests
Perry, 2010 Page 10	Lansing gravelly silt loam, 1390 ft. 2 harvests

Five or six replications of alfalfa plots are seeded at a rate of 18 lbs/acre. Pesticides are applied as needed. Velpar L (2 – 3 pints/A) is applied in the early spring prior to the first and second production years. For insect control, Warrior is applied as needed (0.2 pints/A). Grassy weeds are controlled with Poast.

### **Red Clover and Birdsfoot Trefoil (pg 13):**

Six replications of red clover plots are seeded at a rate of 15 lb per acre and of birdsfoot trefoil plots are seeded at a rate of 10 lb per acre. Pesticides are applied as needed. Grassy weeds are controlled with Poast (2.5 pints/acre).

### **Forage Grass (pg 14-19):**

For each grass species, entries are planted in a trial with four replicates. All entries within a species

are harvested at the same time, starting in mid-May. The trials are harvested four times per year (except bromegrass which is harvested three times per year). In early spring, and following each harvest except the fourth harvest, the plots are fertilized with 315 lb/A ammonium sulfate (21-0-0). Each fall, plots are sprayed with Banvel (1 pt/A) to control broadleaf weeds.

In addition to the four replicates for yield, an additional replicate is planted in the same field to obtain heading dates (date when five heads are visible) and forage quality data. Four samples for forage quality are taken from each entry in this replicate for the first two production years, two samples at first harvest and two samples at late boot stage. These four samples per entry are dried, ground, and analyzed by NIRS. Data reported includes yield, heading date, percent neutral detergent fiber, and percent digestible neutral detergent fiber (48 hr. incubation time in rumen fluid) at first harvest and at late boot stage (2009 data are on page 17-18, 2010 data available in 2011).

### **2010 Growing Season (pg 2):**

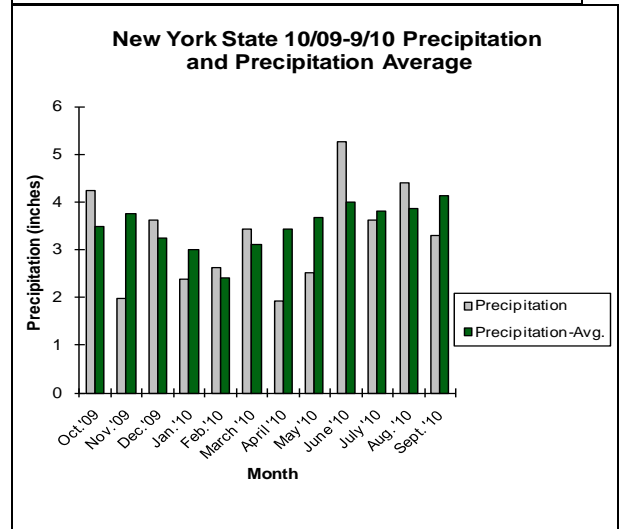
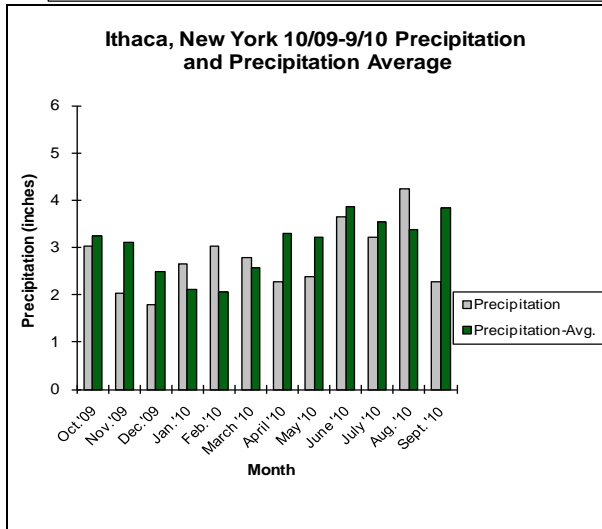
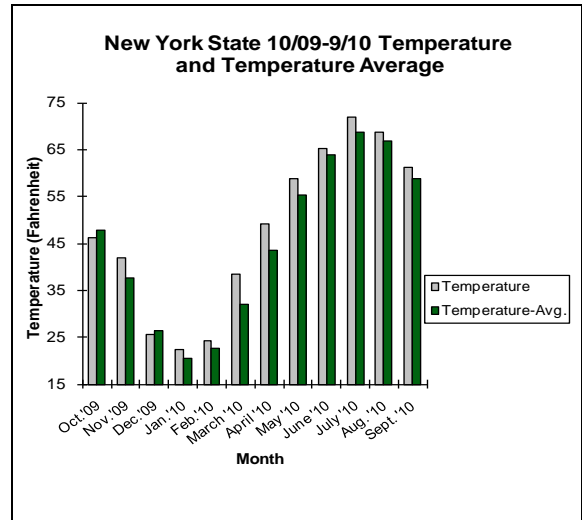
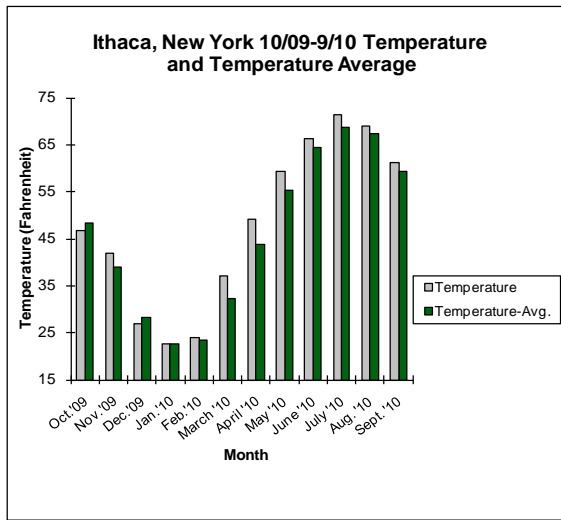
For the state, the spring temperatures were 5.3 degrees above normal and precipitation was 2.4 inches below normal. The summer temperatures were 2.1 degrees above normal and precipitation was 1.6 inches above normal. September and October were both above average for temperature. September had 75% of the normal precipitation and October had 200% of the normal precipitation.

Alfalfa yields for 2010 averaged 6.4 tons per acre dry matter (0.2 tons more than in 2009), red clover yields averaged 3.7 tons per acre dry matter (0.9 tons per acre less than in 2009 due to dry conditions), and perennial forage grass yields averaged 6.1 tons per acre dry matter (0.2 tons per acre less than in 2009).

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Cornell University



From: [www.nrcc.cornell.edu/page\\_summaries.html](http://www.nrcc.cornell.edu/page_summaries.html).

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Questions or comments? Please contact Julie Hansen, [jlh17@cornell.edu](mailto:jlh17@cornell.edu), 607-255-5043

Table number where Alfalfa Cultivars/Experimental populations are listed.

Alfalfa Cultivar/ Experimental Pop.	Table Number							
	1	2	3	4	5	6	7	8
375HY/BR*							X	
4010BR*		X					X	
4030*				X			X	
4A415				X			X	
4P424								X
4S417				X	X	X	X	
5312 (check)	X	X	X	X	X	X	X	X
53H92							X	X
54Q32*					X	X		
55V12*					X	X		
55V48	X	X	X	X	X	X	X	
6415	X	X						
6417			X	X				
6475H								X
A 4330*				X				
A 4440*				X				
A 5225	X	X						
AMERISTAND 403T PLUS					X	X		
AMERISTAND 407TQ	X	X	X	X	X	X		
ATTENTION II*		X						
BARALFA X42							X	
CORNERSTONE							X	
CW 02001*							X	
CW 053015*							X	
DG 3210							X	
DG 4210							X	
DKA43-13			X	X	X		X	
DS704-M*		X						
DS705 -M*		X						
DS712-M*		X						
DS911-M*						X		
DS912-M*						X		
DS913-T*						X		
DS915-BR*						X		
DSA01-T*							X	
DSA02-T*							X	
DSA03-T*							X	
DSA04-M*							X	
DSA05-BR*							X	
DSA06-BR*							X	
DSA07-BR*							X	
DSA08-M*							X	
DSA09-L*							X	
ESCALADE				X				
EVERGREEN 3								X
EXP. L							X	X
EZRA			X	X	X	X	X	
FSG 329					X	X		
FSG 351	X	X						

Alfalfa Cultivar/ Experimental Pop.	Table Number							
	1	2	3	4	5	6	7	8
FSG 400LH								X
FSG 406	X	X						
FSG 408DP					X	X		
FSG 408SF*	X	X						
FSG 420 LH					X			X
GENOA				X				
GUARDSMAN II	X	X	X	X	X	X	X	
HYBRIFORCE-2400				X	X	X	X	
HYBRIFORCE-2420*								X
HYBRIFORCE-2420/WET				X	X	X		
KEYSTONE	X							
L 333 HD				X	X			
L 447 HD				X	X			
LANDER	X	X						
LEGENDAIRY 5.0					X			
LS 605							X	
MARVEL				X				
MILESTONE II*				X				
msSunstra-901*					X			
msSunstra-903*					X			
MSSUNSTRA-A10*								X
MSSUNSTRA-A11*								X
N-R-GEE*			X	X	X	X	X	
ONEIDA VR (check)	X	X	X	X	X	X	X	X
PERSIST II*			X	X				
PGI 459	X	X						
PGI 557								X
PHIRST EXTRA								X
PILLAR								X
PLUS II								X
POUNCE					X			X
PROLIFIC II				X	X	X		
REBOUND 5.0			X	X	X	X		
RED FALCON BR*		X						X
REGEN	X	X	X	X	X	X	X	
RENEW*						X		
RUGGED								X
SEEDWAY 9558	X		X	X				
SONIC*						X		
SYNGENTA 6305Q								X
SYNGENTA 6422Q					X	X		
TJA 901*					X	X		
TJA 902*					X	X		
TJA 903*					X	X		
TJA 904*					X	X		
VERNAL (check)	X	X	X	X	X	X	X	X
WL 343HQ	X	X	X		X			X
WL 353LH							X	X
WL 363HQ			X	X	X		X	

Table 1:

**2010 New York Alfalfa Trials**

Warsaw, Wyoming County, Flint Farm

Sown May 2007

Cornell University-Department Plant Breeding and Genetics

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)			2010 Total <sup>^</sup>	2009 Total <sup>^</sup>	2008 Total <sup>^</sup>	3-yr Total <sup>^</sup>	3-yr % of Checks	Seeding yr Total <sup>^</sup>
	3-Jun	13-Jul	26-Aug						
55V48	3.73	2.71	2.21	8.65	8.19	9.16	25.99	114	3.80
KEYSTONE	3.88	2.85	2.31	9.04	7.98	8.77	25.79	113	3.88
FSG 406	3.70	2.57	2.17	8.45	7.91	8.89	25.24	110	4.01
AMERISTAND 407TQ	3.83	2.59	2.16	8.57	7.83	8.62	25.01	110	3.69
PGI 459	3.64	2.63	2.15	8.44	8.02	8.50	24.95	109	3.72
A 5225	3.60	2.66	2.16	8.44	7.76	8.73	24.93	109	3.72
WL 343HQ	3.91	2.71	2.21	8.85	7.67	8.25	24.76	108	3.89
6415	3.63	2.58	2.09	8.30	7.86	8.59	24.75	108	3.92
GUARDSMAN II	3.58	2.58	2.08	8.25	7.74	8.70	24.69	108	3.79
REGEN	3.52	2.53	2.07	8.11	7.75	8.77	24.62	108	3.98
FSG 408SF*	3.30	2.49	2.06	7.85	7.74	8.79	24.39	107	3.78
FSG 351	3.39	2.48	2.08	7.95	7.61	8.65	24.21	106	3.99
5312 (check)	3.39	2.33	1.93	7.64	7.28	8.65	23.58	103	3.76
ONEIDA VR (check)	3.50	2.30	2.01	7.81	7.15	8.43	23.40	102	3.92
LANDER	3.35	2.26	1.96	7.55	7.33	8.23	23.12	101	3.69
SEEDWAY 9558	3.21	2.29	1.95	7.43	7.20	8.25	22.90	100	3.94
VERNAL (check)	3.11	2.16	1.77	7.04	6.72	7.80	21.55	94	3.84
Mean	3.46	2.48	2.03	7.97	7.47	8.47	23.90		3.79
5% LSD	0.23	0.20	0.12	0.40	0.32	0.31	0.76		0.20
CV (%)	5.8	7.0	5.3	4.3	3.7	3.2	2.8		4.5

<sup>^</sup>Variety means are LSMEANS derived from incomplete block statistical analysis. Therefore, season or multiple-year totals will not be the arithmetic sum of individual cuts or years, respectively. Overall means are for 24 trial entries.

\*EXPERIMENTAL ENTRIES

Soil types Bath-Valois; potential corn yield on this soil type is 125-130 bu/A

Table 2:

**2010 New York Alfalfa Trials**

Cornell University Agricultural Experiment Station, Tompkins Co., Ithaca

Sown May 2007

Cornell University-Department Plant Breeding and Genetics

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)			2010 Total <sup>^</sup>	2009 Total <sup>^</sup>	2008 Total <sup>^</sup>	3-yr Total <sup>^</sup>	3-yr % of Checks	% Stand 11/23/2010
	10-Jun	12-Jul	25-Aug						
REGEN	3.19	1.14	1.10	5.42	6.35	7.05	18.81	109	81
4010BR*	3.11	1.19	1.06	5.35	6.48	6.80	18.62	108	81
RED FALCON BR*	3.05	1.22	1.07	5.34	6.50	6.73	18.55	108	82
DS705 -M*	3.09	1.16	1.03	5.28	6.34	6.83	18.46	107	81
A 5225	3.04	1.29	1.08	5.40	6.44	6.57	18.43	107	82
55V48	2.88	1.29	1.06	5.22	6.44	6.66	18.33	106	84
DS704-M*	2.94	1.25	1.10	5.29	6.33	6.56	18.17	105	82
GUARDSMAN II	2.80	1.11	1.12	5.03	6.18	6.98	18.17	105	80
DS712-M*	2.95	1.18	1.11	5.24	6.19	6.60	18.03	105	80
KEYSTONE	3.04	1.23	1.05	5.31	6.11	6.57	17.99	104	82
AMERISTAND 407TQ	2.87	1.23	1.09	5.18	6.28	6.49	17.95	104	81
LANDER	2.81	1.10	1.04	4.95	6.13	6.85	17.93	104	82
WL 343HQ	2.92	1.27	1.08	5.28	6.22	6.42	17.92	104	82
5312 (check)	2.91	1.12	1.07	5.10	5.89	6.92	17.91	104	83
PGI 459	2.87	1.28	1.10	5.25	6.34	6.31	17.91	104	80
FSG 351	2.81	1.15	0.99	4.94	6.00	6.85	17.77	103	82
6415	2.87	1.23	0.99	5.09	6.14	6.34	17.57	102	80
FSG 406	2.87	1.10	0.98	4.94	6.01	6.56	17.51	102	81
ATTENTION II*	2.69	1.17	1.00	4.86	6.22	6.25	17.33	101	81
VERNAL (check)	2.89	1.07	1.07	5.03	5.59	6.53	17.15	100	76
FSG 408SF*	2.56	1.02	0.90	4.48	6.17	6.37	17.01	99	85
ONEIDA VR (check)	2.82	1.02	0.95	4.79	5.50	6.34	16.63	96	82
Mean	2.88	1.15	1.01	5.04	6.05	6.51	17.60		81
5% LSD	0.24	0.10	0.09	0.36	0.33	0.38	0.85		5
CV (%)	6.6	6.6	7.3	5.6	4.4	4.6	3.8		5.3

<sup>^</sup>Variety means are LSMEANS derived from incomplete block statistical analysis. Therefore, season or multiple-year totals will not be the arithmetic sum of individual cuts or years, respectively. Overall means are for 32 trial entries.

\*EXPERIMENTAL ENTRIES

Soil type Williamson; potential corn yield on this soil is 118 bu/A.

Table 3:

**2010 New York Alfalfa Trials**

William H. Miner Agricultural Institute, Clinton County, Chazy

Sown May 2008

Cornell University-Department Plant Breeding and Genetics

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)			2010 Total <sup>^</sup>	2009 Total <sup>^</sup>	2-yr Total <sup>^</sup>	2-yr % of Checks
	7-Jun	19-Jul	23-Aug				
PERSIST II*	2.97	2.28	1.36	6.61	5.74	12.34	120
DKA43-13	3.02	2.37	1.46	6.86	5.38	12.26	120
55V48	3.12	2.34	1.32	6.79	5.47	12.25	120
WL 343HQ	2.97	2.41	1.38	6.75	5.38	12.14	119
L 447 HD	2.98	2.23	1.30	6.52	5.39	11.90	116
REBOUND 5.0	3.08	2.24	1.36	6.68	5.09	11.76	115
6417	2.92	2.20	1.38	6.50	5.19	11.71	114
AMERISTAND 407TQ	2.81	2.23	1.39	6.42	5.26	11.68	114
GUARDSMAN II	2.90	2.16	1.22	6.27	5.24	11.51	112
WL 363HQ	2.83	2.16	1.35	6.34	4.98	11.32	111
REGEN	2.95	1.97	1.16	6.07	5.20	11.26	110
EZRA*	3.04	2.03	1.21	6.28	4.96	11.26	110
L 333 HD	2.84	2.00	1.18	6.02	4.93	10.95	107
ONEIDA VR (check)	2.77	1.96	1.20	5.93	4.98	10.93	107
N-R-GEE*	2.82	2.04	1.19	6.04	4.72	10.75	105
SEEDWAY 9558	2.70	1.93	1.11	5.75	4.96	10.71	105
5312 (check)	2.88	1.88	1.08	5.83	4.54	10.37	101
VERNAL (check)	2.35	1.74	0.96	5.06	4.35	9.42	92
Mean	2.83	2.09	1.23	6.15	4.96	11.11	
5% LSD	0.34	0.25	0.13	0.68	0.57	1.16	
CV (%)	8.5	8.6	7.6	7.8	8.2	7.4	

<sup>^</sup>Variety means are LSMEANS derived from incomplete block statistical analysis. Therefore, season or multiple-year totals will not be the arithmetic sum of individual cuts or years, respectively. Overall means are for 28 trial entries.

\*EXPERIMENTAL ENTRIES

Soil type is Raynham; potential corn yield on this soil type is 115 bu/A.

Table 4:

**2010 New York Alfalfa Trials**

Cornell University Agricultural Experiment Station, Tompkins Co., Ithaca

Sown May 2008

Cornell University-Department Plant Breeding and Genetics

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)			2010 Total <sup>^</sup>	2009 Total <sup>^</sup>	2-yr Total <sup>^</sup>	2-yr % of Checks	% Stand 10/8/2010
	13-Jun	21-Jul	30-Aug					
4030*	2.38	1.62	0.88	4.87	5.89	10.75	122	87
HYBRIFORCE-2400*	2.36	1.62	0.82	4.80	5.81	10.62	120	89
PERSIST II*	2.36	1.68	0.84	4.87	5.73	10.61	120	88
PROLIFIC II*	2.29	1.58	0.82	4.69	5.63	10.32	117	88
4S417*	2.27	1.52	0.82	4.61	5.66	10.27	116	90
HYBRIFORCE-2420/WET*	2.28	1.56	0.84	4.68	5.55	10.22	116	89
REGEN	2.37	1.59	0.78	4.74	5.42	10.15	115	90
4A415*	2.28	1.53	0.78	4.60	5.41	10.00	113	86
MILESTONE II*	2.25	1.52	0.80	4.57	5.36	9.93	112	88
55V48	2.28	1.55	0.81	4.64	5.27	9.92	112	88
EZRA*	2.28	1.52	0.77	4.58	5.30	9.88	112	89
GUARDSMAN II	2.33	1.52	0.78	4.63	5.21	9.83	111	87
GENOA	2.21	1.54	0.75	4.51	5.24	9.74	110	90
AMERISTAND 407TQ	2.05	1.55	0.81	4.42	5.31	9.74	110	87
L 447 HD	2.03	1.48	0.86	4.38	5.37	9.74	110	90
N-R-GEE*	2.26	1.55	0.76	4.57	5.16	9.72	110	90
A 4330*	2.19	1.53	0.81	4.53	5.10	9.62	109	88
6417	2.09	1.52	0.80	4.41	5.15	9.57	108	88
WL 363HQ	2.05	1.55	0.81	4.42	5.12	9.54	108	88
ESCALADE	2.07	1.50	0.76	4.34	5.11	9.45	107	90
REBOUND 5.0	2.07	1.50	0.76	4.33	5.11	9.44	107	87
SEEDWAY 9558	2.10	1.51	0.76	4.38	5.03	9.41	106	88
DKA43-13	2.01	1.48	0.77	4.26	5.10	9.36	106	90
MARVEL	1.89	1.43	0.74	4.04	5.23	9.27	105	90
L 333 HD	2.08	1.43	0.73	4.23	4.92	9.16	103	86
A 4440*	1.98	1.41	0.69	4.08	5.03	9.11	103	89
5312 (check)	2.08	1.39	0.71	4.18	4.92	9.10	103	88
ONEIDA VR (check)	1.92	1.31	0.71	3.95	4.92	8.87	100	87
VERNAL (check)	1.97	1.32	0.63	3.94	4.63	8.57	97	81
Mean	2.16	1.50	0.76	4.42	5.20	9.62		88
5% LSD	0.21	0.13	0.07	0.37	0.28	0.57		3
CV (%)	7.8	7.2	7.8	6.7	4.3	4.7		2.8

<sup>^</sup>Variety means are LSMEANS derived from incomplete block statistical analysis. Therefore, season or multiple-year totals will not be the arithmetic sum of individual cuts or years, respectively. Overall means are for 36 trial entries.

\*EXPERIMENTAL ENTRIES

Soil type is Erie; potential corn yield on this soil type is 108 bu/A.

Table 5:

**2010 New York Alfalfa Trials**

State University of New York at Cobleskill, Schoharie County

Sown July 2009

Cornell University-Department Plant Breeding and Genetics

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)				2010 Total <sup>^</sup>	1-Yr. % of Checks
	25-May	14-Jul	17-Aug	10-Oct		
msSunstra-901*	3.26	2.48	1.96	1.54	9.24	116
msSunstra-903*	3.11	2.30	1.88	1.59	8.89	111
FSG 329	3.05	2.40	1.91	1.52	8.88	111
TJA 901*	3.02	2.37	1.90	1.56	8.85	111
TJA 904*	3.06	2.44	1.81	1.50	8.82	110
TJA 902*	3.02	2.39	1.81	1.55	8.77	110
REGEN	3.03	2.35	1.81	1.49	8.68	109
4S417	3.01	2.35	1.82	1.50	8.68	109
EZRA*	3.06	2.32	1.78	1.50	8.67	108
GUARDSMAN II	3.02	2.26	1.80	1.58	8.65	108
HYBRIFORCE-2400	3.00	2.31	1.82	1.51	8.63	108
Prolific II	2.94	2.32	1.82	1.47	8.54	107
TJA 903*	3.00	2.16	1.78	1.50	8.43	106
HYBRIFORCE-2420/WET	2.90	2.24	1.80	1.46	8.41	105
ONEIDA VR (check)	2.90	2.05	1.76	1.50	8.22	103
5312 (check)	2.93	2.15	1.67	1.41	8.16	102
FSG 408DP	2.90	2.09	1.71	1.46	8.15	102
POUNCE	2.96	2.14	1.67	1.38	8.14	102
WL 363HQ	2.78	2.22	1.71	1.41	8.12	102
54Q32*	2.76	2.17	1.74	1.36	8.03	101
LEGENDAIRY 5.0	2.74	2.20	1.71	1.37	8.03	100
REBOUND 5.0	2.75	2.10	1.75	1.38	7.98	100
55V48	2.79	1.96	1.68	1.54	7.97	100
N-R-GEE*	2.78	1.99	1.65	1.41	7.82	98
AMERISTAND 403T PLUS	2.72	2.12	1.66	1.28	7.77	97
AMERISTAND 407TQ	2.74	1.99	1.68	1.31	7.73	97
SYNGENTA 6422Q	2.57	2.17	1.67	1.30	7.71	97
55V12*	2.75	1.93	1.57	1.38	7.63	95
VERNAL (check)	2.72	2.01	1.63	1.24	7.60	95
DKA43-13	2.57	2.02	1.64	1.34	7.57	95
WL 343HQ	2.67	2.05	1.51	1.20	7.44	93
FSG 420 LH	2.56	2.03	1.56	1.26	7.41	93
Mean	2.84	2.15	1.71	1.41	8.11	
5% LSD	0.14	0.22	0.10	0.06	0.40	
CV (%)	4.4	9.0	5.3	4.0	4.3	

<sup>^</sup>Variety means are LSMEANS derived from incomplete block statistical analysis. Therefore, season or multiple-year totals will not be the arithmetic sum of individual cuts or years, respectively. Overall means are for 40 trial entries.

\*EXPERIMENTAL ENTRIES

Soil type is Barbour Tioga; potential corn yield on this soil type is 140 bu/A.



Table 6:

**2010 New York Alfalfa Trials**

Cornell University Agricultural Experiment Station, Tompkins Co., Ithaca

Sown April 2009

Cornell University-Department Plant Breeding and Genetics

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)			2010 Total <sup>^</sup>	1-Yr. % of checks	%Stand 9/29/2010
	10-Jun	18-Jul	31-Aug			
DS913-T*	3.35	2.33	1.55	7.22	117	88
SONIC*	3.22	2.31	1.55	7.08	115	89
PROLIFIC II	3.16	2.34	1.49	6.99	114	87
RENEW*	3.07	2.33	1.53	6.93	113	88
4S417	3.13	2.29	1.49	6.91	112	87
HYBRIFORCE-2400	3.14	2.25	1.46	6.86	111	88
TJA 904*	3.08	2.33	1.44	6.83	111	86
TJA 901*	3.15	2.22	1.45	6.83	111	86
TJA 903*	3.15	2.23	1.43	6.80	111	90
DS911-M*	3.02	2.26	1.53	6.80	111	88
DS915-BR*	3.02	2.17	1.52	6.73	109	89
HYBRIFORCE-2420/WET	3.07	2.26	1.36	6.71	109	90
GUARDSMAN II	3.02	2.21	1.46	6.69	109	87
LS 605	2.94	2.33	1.42	6.68	109	88
DS912-M*	3.01	2.20	1.48	6.67	109	85
FSG 329	2.93	2.27	1.46	6.67	108	86
TJA 902*	3.06	2.16	1.44	6.64	108	89
REGEN	2.97	2.21	1.40	6.57	107	85
AMERISTAND 407TQ	2.75	2.36	1.42	6.54	106	86
EZRA*	2.96	2.22	1.34	6.54	106	90
55V48	2.96	2.19	1.37	6.54	106	87
5312 (check)	3.02	2.19	1.31	6.53	106	88
55V12*	2.91	2.13	1.36	6.40	104	89
54Q32*	2.71	2.28	1.36	6.35	103	89
L333 HD	2.83	2.20	1.31	6.33	103	86
SYNGENTA 6422Q	2.74	2.26	1.34	6.33	103	87
FSG 408DP	2.80	2.11	1.41	6.32	103	82
REBOUND 5.0	2.78	2.18	1.34	6.29	102	89
AMERISTAND 403T PLUS	2.85	2.16	1.26	6.28	102	90
N-R-GEE*	2.77	2.17	1.28	6.22	101	89
ONEIDA VR (check)	2.81	1.99	1.23	6.02	98	85
VERNAL (check)	2.70	1.91	1.30	5.91	96	87
Mean	2.94	2.20	1.38	6.52		88
5% LSD	0.18	0.16	0.10	0.32		6
CV (%)	4.9	5.7	5.6	4.0		5.5

<sup>^</sup>Variety means are LSMEANS derived from incomplete block statistical analysis. Therefore, season or multiple-year totals

will not be the arithmetic sum of individual cuts or years, respectively.

Overall means are for 40 trial entries.

\*EXPERIMENTAL ENTRIES

Soil type is Madalin silt loam; potential corn yield on this soil type is 95 bu/A.

Table 7:

**2010 New York Alfalfa Trials**

Perry, Wyoming County, True Farm

Sown April 2010

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)		Seeding Yr. % of Checks
	28-Jul	Checks	
4030*	2.06	120	
PHIRST EXTRA	1.97	115	
375HY/BR*	1.96	115	
4010BR*	1.94	113	
MSSUNSTRA-A11*	1.93	113	
MSSUNSTRA-A10*	1.92	112	
4S417	1.91	112	
PGI 557	1.89	111	
HYBRIFORCE-2400	1.86	109	
HYBRIFORCE-2420*	1.86	109	
CW 053015*	1.82	107	
REGEN	1.82	107	
55V48	1.82	106	
CORNERSTONE	1.79	105	
PILLAR	1.78	104	
N-R-GEE*	1.77	104	
ONEIDA VR (check)	1.77	104	
EZRA	1.76	103	
SYNGENTA 6305Q	1.75	102	
WL343HQ	1.73	101	
DG 3210	1.72	100	
RUGGED	1.71	100	
DG 4210	1.70	100	
CW 02001*	1.70	99	
5312 (check)	1.70	99	
VERNAL (check)	1.65	96	
WL 363HQ	1.65	96	
PLUSS II	1.64	96	
Mean	1.79		
5% LSD	0.14		
CV (%)	6.9		

**\*EXPERIMENTAL ENTRIES**

First cut was not weighed for yield.

Overall means are for 32 trial entries.

Soil type is Lansing; potential corn yield on this soil is 140 bu/A.

**2010 New York Alfalfa Trials**

Cornell University Agricultural Experiment Station, Tompkins Co., Ithaca

Sown May 2010

Cornell University-Department Plant Breeding and Genetics

Released And Experimental Varieties	2010 Harvest (yields reported in tons/acre)			Seeding Yr. % of Checks
	28-Jul	20-Sep	Total <sup>^</sup>	
DSA05-BR*	3.01	1.86	4.86	123
DSA02-T*	2.99	1.78	4.77	121
4030*	3.00	1.71	4.71	119
DSA01-T*	2.94	1.76	4.71	119
DSA08-M*	2.86	1.84	4.69	118
DSA06-BR*	2.83	1.77	4.61	116
DSA07-BR*	2.88	1.72	4.59	116
DSA03-T*	2.77	1.77	4.54	115
DSA04-M*	2.80	1.68	4.48	113
DSA09-L*	2.74	1.58	4.31	109
HYBRIFORCE-2400	2.69	1.61	4.31	109
BARALFA X42	2.59	1.64	4.23	107
4010BR*	2.65	1.58	4.22	107
HYBRIFORCE-2420*	2.70	1.47	4.17	105
EXP. L	2.59	1.55	4.15	105
RUGGED	2.63	1.48	4.12	104
CORNERSTONE	2.61	1.48	4.09	103
55V48	2.55	1.53	4.07	103
GUARDSMAN II	2.52	1.54	4.06	103
PGI 557	2.52	1.55	4.06	102
5312 (check)	2.46	1.55	4.01	101
REGEN	2.45	1.55	4.01	101
VERNAL (check)	2.42	1.57	3.99	101
53H92	2.54	1.44	3.98	101
4A415	2.43	1.53	3.97	100
WL 363HQ	2.50	1.43	3.93	99
RED FALCON BR*	2.38	1.55	3.92	99
CW 053015*	2.52	1.39	3.92	99
EZRA	2.44	1.47	3.91	99
ONEIDA VR (check)	2.37	1.51	3.87	98
DG 4210	2.47	1.33	3.79	96
CW 02001*	2.36	1.40	3.76	95
WL 343HQ	2.39	1.28	3.67	93
DG 3210	2.43	1.22	3.66	92
PLUSS II	2.34	1.32	3.65	92
DKA43-13	2.24	1.40	3.64	92
PILLAR	2.26	1.37	3.62	92
WL 353LH	2.34	1.26	3.59	91
SYNGENTA 6305Q	2.34	1.25	3.57	90
N-R-GEE*	2.25	1.29	3.55	90
Mean	2.55	1.51	4.05	
5% LSD	0.29	0.10	0.33	
CV (%)	9.0	5.4	6.5	

**\*EXPERIMENTAL ENTRIES**

Overall means are for 44 trial entries

Soil type is Williamson; potential corn yield on this soil is 118 bu/A.

<sup>^</sup>Variety means are LSMEANS derived from incomplete block statistical analysis. Therefore, season or multiple-year totals will not be the arithmetic sum of individual cuts or years, respectively.

Table 8: Alfalfa trials in Ithaca NY where insecticides were not applied to control potato leafhoppers. Check cultivars are conventional alfalfa cultivars that are planted in all yield trials. PLH Damage Score: 1=minor to no damage to 5=severe damage.

Sown May 9, 2007											
Cultivar	2010							3-Yr	4-Yr.		
	17-Jun	27-Jul	24-Sep	Total Season	% of Checks	PLH Damage Score 7/27	% Stand 23-Nov	Total	% of Cks.	Avg. PLH Score	
	--- tons per acre dry matter ---							T/A			
FSG 400LH	3.34	2.49	1.04	6.87	105	1.3	79	17.47	105	1.8	
5312 (PLH susceptible check)	3.17	2.43	1.04	6.65	102	1.8	83	17.13	103	2.6	
53H92	3.17	2.31	1.00	6.48	99	1.0	84	16.48	99	1.2	
Vernal (PLH susceptible check)	2.89	2.37	1.11	6.36	97	1.8	80	16.43	99	2.9	
Oneida VR (PLH susceptible check)	3.14	2.39	1.09	6.62	101	2.2	83	16.41	99	3.0	
EverGreen 3	2.96	2.39	0.98	6.33	97	1.0	79	16.34	98	1.4	
4P424	2.86	2.23	0.93	6.03	92	1.0	78	15.54	93	1.1	
					Ck. Mean				Ck. Mean		
Trial Mean (T/A)	3.15	2.26	0.99	6.40	6.54	1.3	78	16.37	16.66		
LSD(.05)	0.33	0.22	0.16	0.63		0.4	4	1.44			
CV(%)	8.9	8.3	14.0	8.6		28.1	4.4	7.6			

Soil type is Hudson. Yield potential of corn on this soil type is 135 bu/A.

Sown May 12, 2009									
Cultivar	2010							2-Yr	
	19-Jun	29-Jul	21-Sep	Total Season	% of Checks	PLH Damage Score 7/31	% Stand 1-Nov	Avg. PLH Score	
	--- tons per acre dry matter ---								
53H92	2.71	1.65	0.79	5.15	103	1.3	86	0.7	
Pounce	2.73	1.56	0.83	5.12	102	2.9	89	1.5	
5312 (PLH susceptible check)	2.74	1.56	0.81	5.11	102	3.7	83	1.8	
Vernal (PLH susceptible check)	2.68	1.54	0.83	5.05	101	3.6	79	1.8	
Oneida VR (PLH susceptible check)	2.56	1.53	0.80	4.89	97	4.5	88	2.3	
FSG 420 LH	2.34	1.58	0.72	4.63	92	1.1	87	0.5	
6475H	2.23	1.62	0.77	4.61	92	1.0	82	0.5	
					Ck. Mean				
Trial Mean (T/A)	2.72	1.62	0.81	5.16	5.02	1.88	85		
LSD(.05)	0.23	0.16	0.06	0.37		0.52	3		
CV(%)	7.4	8.5	6.2	6.1		24.1	3.3		

Soil type is Langford. Yield potential of corn on this soil type is 120 bu/A.

Sown May 4, 2010							
Cultivar	2010						
	31-Jul	23-Sep	Total Season	% of Checks	PLH Damage Score 7/31	% Stand 27-Oct	
	-- tons per acre dry matter --						
53H92	2.50	1.43	3.93	105	2.3	98	
Exp. L	2.32	1.46	3.77	101	3.7	97	
Vernal (PLH susceptible check)	2.31	1.46	3.76	101	4.8	93	
5312 (PLH susceptible check)	2.35	1.38	3.74	100	4.8	94	
Oneida VR (PLH susceptible check)	2.28	1.40	3.68	99	5.0	97	
WL353 LH	2.23	1.23	3.46	93	2.2	97	
6475H	2.14	1.11	3.26	87	2.7	96	
				Ck. Mean			
Trial Mean (T/A)	2.33	1.35	3.68	3.73	3.2	95	
LSD(.05)	0.18	0.11	0.23		0.5	2	
CV(%)	6.5	6.8	5.3		12.3	1.9	

Soil type is Williamson; potential corn yield on this soil is 118 bu/A.

**Table 9: Alfalfa Cultivar Features**

For more information log on to the Web:

<http://plbrgen.cals.cornell.edu/cals/pbg/programs/departmental/forage/foragetest.cfm>

Cultivars listed are currently tested in Cornell Alfalfa Trials. Yield data for cultivars in new trial seedings will be available next year.

Alfalfa Cultivar	Marketing Company	FD	Disease Resistance Ratings*					Marketing Co.	
			BW	VW	FW	AN	PRR	Phone Number	Web or E-mail Address
EXP. L	Allied Seeds LLC	4	HR	HR	HR	HR	HR	1-208-250-6321	<a href="http://www.alliedseed.com">www.alliedseed.com</a>
LANDER	Allied Seeds LLC	4	HR	R	LR	MR	MR		
AMERISTAND 404LH	America's Alfalfa	4	HR	HR	HR	HR	HR	1-800-873-2532	<a href="http://www.americasalfalfa.com/">http://www.americasalfalfa.com/</a>
AMERISTAND 403T PLUS	America's Alfalfa	4	HR	HR	HR	HR	HR		
AMERISTAND 407TQ	America's Alfalfa	4	HR	HR	HR	HR	HR		
ATTENTION II	AMPAC Seed Company	5	HR	R	HR	HR	R	1-800-547-3230	<a href="http://www.ampacseed.com">www.ampacseed.com</a>
RADIANCE HD	AMPAC Seed Company	4	HR	R	HR	HR	HR		
BARALFA X42	Barenbrug USA	4	HR	HR	HR	HR	HR	1-800-547-4101	<a href="http://www.barusa.com">www.barusa.com</a>
RED FALCON BR	Blue River Hybrids	4	HR	HR	HR	HR	HR	1-800-370-7979	<a href="http://www.blueriverorgseed.com/">www.blueriverorgseed.com/</a>
CORNERSTONE	Chemgro Seeds	4	HR	HR	HR	HR	HR		
KEYSTONE	Chemgro Seeds	3	HR	HR	HR	HR	HR	1-800-346-4769	<a href="http://www.chemgro.com">www.chemgro.com</a>
MILESTONE II	Chemgro Seeds	3	HR	HR	HR	HR	HR		
LEGENDAIRY 5.0	CROPLAN GENETICS	3	HR	HR	HR	HR	HR	1-651-765-5710	<a href="http://www.croplangenetics.com">www.croplangenetics.com</a>
REBOUND 5.0	CROPLAN GENETICS	4	HR	HR	HR	HR	HR		
HYBRIFORCE-2400	Dairyland Seed Co.	4	HR	HR	HR	HR	HR	1-262-626-3080	<a href="http://www.dairylandseed.com">http://www.dairylandseed.com</a>
HYBRIFORCE-2420/WET	Dairyland Seed Co.	4	HR	HR	HR	HR	HR		
POUNCE	Doebler's	3	HR	HR	HR	HR	HR	1-800-853-2676	<a href="http://www.doeblers.com">www.doeblers.com</a>
PERSIST II	Doebler's	4	HR	HR	HR	HR	HR		
PILLAR	Doebler's	4	HR	HR	HR	HR	HR		
PHIRST EXTRA	Doebler's	4	HR	HR	HR	HR	HR		
PLUSS II	Doebler's	4	HR	HR	HR	HR	HR		
PROLIFIC II	Doebler's	4	HR	HR	HR	HR	HR		
ESCALADE	GROWMARK FS	5	HR	R	R	R	HR		
MARVEL	GROWMARK FS	4	HR	HR	HR	HR	HR		
6415	Garst Seed Co.	4	HR	HR	HR	HR	HR	1-888-464-2778	<a href="http://www.garstseed.com">www.garstseed.com</a>
6417	Garst Seed Co.	4	HR	HR	HR	HR	HR		
6426	Garst Seed Co.	4	HR	HR	HR	HR	HR		
L 333HD	Legacy Seeds	3	HR	HR	HR	HR	HR	1-866-791-6390	<a href="http://www.legacyseeds.com">www.legacyseeds.com</a>
L 447HD	Legacy Seeds	4	HR	R	HR	HR	HR		
DKA43-13	Monsanto	4	HR	HR	HR	HR	HR	1-800-335-2676	<a href="http://www.monsanto.com">www.monsanto.com</a>
4A415	Mycogen Seeds	4	HR	HR	HR	HR	HR	1-800-MYCOGEN	<a href="http://www.dowagro.com/mycogen">www.dowagro.com/mycogen</a>
4P424	Mycogen Seeds	4	HR	HR	HR	HR	HR		
4S417	Mycogen Seeds	4	HR	HR	HR	HR	HR		
SONIC	NuTech Seed	4	HR	HR	HR	HR	HR	1-800-942-6748	<a href="http://www.nutechseed.com">www.nutechseed.com</a>
EVERGREEN 3	NK Brand Seeds	4	HR	HR	HR	HR	HR	1-800-445-0956	<a href="http://www.nk-us.com">www.nk-us.com</a>
GENOA	NK Brand Seeds	4	HR	HR	HR	HR	HR		
6305Q	Snygenta	3	HR	HR	HR	HR	HR		
6422Q	Syngenta	4	HR	HR	HR	HR	HR		
6475H	Syngenta	4	HR	HR	HR	HR	HR		
53H92	Pioneer Hi-Bred	3	HR	HR	HR	HR	HR	1-800-247-6803	<a href="http://www.pioneer.com">www.pioneer.com</a>
54Q32	Pioneer Hi-Bred	4	HR	HR	HR	HR	HR		
55V12	Pioneer Hi-Bred	5	R	HR	HR	HR	HR		
55V48	Pioneer Hi-Bred	5	HR	R	HR	HR	HR		
4030	Preferred Seed Co.	4	HR	HR	HR	HR	HR	1-716-895-7333	<a href="http://www.preferredseed.com">www.preferredseed.com</a>
A4330	Producer's Choice	4	HR	HR	HR	HR	HR	1-877-560-5181	<a href="http://www.producerschoiceseed.com">www.producerschoiceseed.com</a>
A4440	Producer's Choice	4	HR	HR	HR	HR	HR		
A5225	Producer's Choice	5	HR	HR	HR	HR	HR		
PGI 459	Producer's Choice	4	HR	HR	HR	HR	HR		
PGI 557	Producer's Choice	5	HR	HR	HR	HR	HR		
RUGGED	Producer's Choice	3	HR	HR	HR	HR	HR		
EZRA	Seedway/FSG	3	R	R	HR	HR	R	1-800-836-3710	<a href="http://www.seedway.com">www.seedway.com</a>
GUARDSMAN II	Seedway/FSG	4	HR	HR	HR	HR	HR		
N-R-GEE	Seedway/FSG	4	HR	HR	HR	R	R		
REGEN	Seedway/FSG	3	R	HR	HR	HR	R		
SEEDWAY 9558	Seedway/FSG	3	HR	HR	HR	HR	R		
FSG 329	Seedway/FSG	3	HR	HR	HR	HR	HR		
FSG 351	Seedway/FSG	3	HR	R	HR	HR	HR		
FSG 400 LH	Seedway/FSG	4	HR	HR	HR	HR	HR		
FSG 406	Seedway/FSG	4	HR	HR	HR	HR	HR		
FSG 408 DP	Seedway/FSG	4	HR	R	HR	HR	HR		
FSG 420 LH	Seedway/FSG	4	HR	HR	HR	HR	HR		
DG3210	Crop Production Services	3	HR	HR	HR	HR	HR	1-585-586-1330	<a href="http://www.cropproductionservices.com">www.cropproductionservices.com</a>
DG4210	Crop Production Services	4	HR	HR	HR	HR	HR		
WL 343HQ	Crop Production Services, HYTEST, AgriCulver	4	HR	HR	HR	HR	HR		
WL 353LH	W-L Research	4	HR	HR	HR	HR	HR	1-717-917-1609	<a href="http://www.wlresearch.com">www.wlresearch.com</a>
WL 363HQ	Crop Production Services, HYTEST, AgriCulver	5	HR	HR	HR	HR	HR		
5312	check	3	HR	HR	HR	HR	HR		
ONEIDA VR	check	3	R	HR	HR	MR	MR		
VERNAL	check	2	R	-	MR	-	-		

\*Disease ratings were provided by source companies, and from standard national tests.

Disease ratings code: HR = High resistance ( 50% or more of the plants resistant), R= Resistance (31-50% resistant), MR = Moderate resistance

FD = fall dormancy. Fall Dormancy ratings of 2,3 or 4 are recommended for New York State.

Cultivars rated R or HR to BW, VW, and Prr should have sufficient disease resistances to perform well in New York State.

\*BW - bacterial wilt, VW-Verticillium wilt, FW-Fusarium wilt, An-Anthracnose, Prr-Phytophthora root rot

**Table 10: Red Clover and Birdsfoot Trefoil Cultivar Yield Trials- 2010 Ithaca, Tompkins Co.**

T/A = tons per acre dry matter; 5%LSD = to claim statistically significant yield differences between two cultivars, the yield difference must be equal to or greater than the LSD.

Sown May 9, 2007		2010					2009		2008		3-Yr.	
Red Clover				Total	% of	% Stand	Total	% of	Total	Total	% of	
Cultivar/Experimental	Marketing Company*	16-Jun	26-Jul	Season	Cks.	23-Nov	Season	Cks.	Season	Total	Cks.	
				T/A			T/A		T/A	T/A		
Robust	Seed Research of Oregon	1.78	0.62	2.40	112	33	5.12	111	5.08	12.70	110	
Star Fire II	AgriCulver/ AMPAC Seed	1.84	0.67	2.51	117	53	4.88	106	5.13	12.50	108	
Raven	Seed Research of Oregon	1.68	0.62	2.30	107	42	4.99	109	4.93	12.42	107	
Marathon (check)	WI Check	1.71	0.62	2.33	108	43	4.49	98	4.87	11.77	102	
Duration Extra	Preferred Seed	1.64	0.64	2.28	106	47	4.50	98	4.56	11.63	101	
Arlington (check)	WI Check	1.46	0.50	1.96	91	14	4.70	102	4.64	11.37	98	
Rocket	Seed Research of Oregon	1.39	0.60	1.99	93	34	4.24	92	4.85	10.96	95	
GO-ABT	Grassland Oregon	0.82	0.21	1.03	48	6	3.75	81	4.64	9.46	82	
GO-ABR	Grassland Oregon	0.92	0.18	1.11	51	5	3.13	68	4.15	8.54	74	
					Ck. Mean			Ck. Mean			Ck. Mean	
5% LSD		0.39	0.13	0.49	2.15	10	0.88	4.60	0.50	1.75	11.57	

Sown May 7, 2008		2010					2009		2-Yr.	
Red Clover				Total	% of	% Stand	Total	% of	Total	% of
Cultivar/Experimental	Marketing Company	14-Jun	25-Jul	Season	Cks.	28-Sep	Season	Cks.	Total	Cks.
				T/A			T/A		T/A	
Emerald	Cal/West Seeds	2.24	1.39	3.62	129	77	7.09	108	10.71	114
FP 345	Allied Seed LLC	2.30	1.35	3.65	129	67	6.99	107	10.64	114
CW202	Cal/West Seeds	2.20	1.39	3.59	127	67	6.86	105	10.45	111
RC0006 (expt)	Allied Seed LLC	2.07	1.18	3.25	115	55	6.81	104	10.06	107
Marathon (check)	WI Check	1.88	1.11	2.99	106	63	6.60	101	9.59	102
Arlington (check)	WI Check	1.78	0.87	2.65	94	22	6.49	99	9.14	98
					Ck. Mean			Ck. Mean		Ck. Mean
5% LSD		0.42	0.22	0.42	2.82	15	0.58	6.54	1.08	9.37

Sown May 12, 2009		2010					2009	
Red Clover				Total	% of	% Stand		% of
Cultivar/Experimental	Marketing Company	15-Jun	28-Jul	Season	Cks.	1-Nov	26-Aug	Checks
				T/A			T/A	
Marathon (check)	WI check	3.65	1.90	6.25	104	83	1.58	97
C328	WI experimental	3.47	1.99	6.18	103	85	1.62	99
LS 9703	Lewis Seed	3.62	1.90	6.17	103	88	1.70	104
StarFire II	AgriCulver/ AMPAC Seed	3.49	1.91	6.12	102	86	1.67	102
Arlington (check)	WI check	3.62	1.53	5.76	96	80	1.70	104
					Ck. Mean			Ck. Mean
5% LSD		0.23	0.20	0.41	6.01	4	0.11	1.64

Sown May 12, 2009		2010					2009	
Birdsfoot Trefoil				Total	% of	% Stand		% of
Cultivar/Experimental	Marketing Company	18-Jun	28-Jul	Season	Cks.	1-Nov	26-Aug	Norcen
				T/A			T/A	
Bruce	Semican	2.90	1.34	4.55	143	70	2.70	151
Pardee	Seedway/FSG/GROWMARK	2.76	1.46	4.55	143	74	2.37	132
WITT	Public Check	2.49	1.09	3.91	123	52	2.45	137
AC Langile	Public Check	2.37	1.13	3.81	120	62	2.23	125
Norcen	Public Check	1.38	1.16	3.17	100	48	1.79	100
LSD(.05)		0.22	0.13	0.31		4	0.19	

Sown May 11, 2010		2010					2009	
Red Clover				Total	% of	% Stand		% of
Cultivar/Experimental	Marketing Company	18-Jun	28-Jul	Season	Cks.	1-Nov	26-Aug	Norcen
CW 30091	Cal/West Seeds							
Cinnamon Plus	Allied Seed LLC							
Freedom!MR	Barenbrug USA							
****Production Year Data Available in 2011****								

Marketing Company*	Phone	Web address
AgriCulver	1-800-836-3701	<a href="http://www.agriculverseeds.com">www.agriculverseeds.com</a>
Allied Seed LLC	1-208-250-6321	<a href="http://www.alliedseed.com">www.alliedseed.com</a>
AMPAC Seed	1-541-928-1651	<a href="http://www.ampacseed.com">www.ampacseed.com</a>
Cal/West	1-800-297-3332	<a href="http://www.calwestseeds.com">www.calwestseeds.com</a>
Dairyland Seed Company	1-800-236-0163	<a href="http://www.dairylandseed.com">www.dairylandseed.com</a>
Grassland Oregon	1-503-566-9900	
Lewis Seed	1-541-491-3700	<a href="http://www.lewisseed.com">www.lewisseed.com</a>
Preferred Seed	1-716-895-7333	<a href="http://www.preferredseed.com">www.preferredseed.com</a>
Seed Research of Oregon	1-800-253-5766	<a href="http://www.sroseed.com">www.sroseed.com</a>
Seedway/FSG	1-800-836-3710	<a href="http://www.seedway.com">www.seedway.com</a>
Semican	1-866-736-4226	<a href="http://www.semican.ca">www.semican.ca</a>

**Table 11: 2010 Perennial Forage Grass Yield Summary**  
(T/A - tons per acre dry matter)

\*, \*\* = significant differences among varieties at P<0.05 and P<0.01, respectively; ns = no significant differences among varieties.  
Heading date is date when 5 heads in a 3.5 x 16 foot plot were visible.

Ithaca, Tompkins Co., Sown 2007, 2008, 2009  
Soils

2007 Niagara silt loam  
2008, '09 Williamson very fine sandy silt loam

Timothy		2010						2009			2008		3 or 2-Yr. Total	
Sown May 4, 2007		2-Jun	30-Jun	13-Aug	18-Oct	Total Season	% Stand 23-Nov	Heading Date	Total Season	% Stand 10-Nov	Heading Date	Total Season		Heading Date
---- tons per acre dry matter ----														
Derby	Allied Seed Co., L.L.C.	4.38	0.80	1.12	0.64	6.93	70	21-May	6.81	70	22-May	6.44	29-May	20.18
Clair	check	4.36	0.80	1.01	0.66	6.83	69	21-May	6.88	74	22-May	6.30	29-May	20.01
Summit	Allied Seed Co., L.L.C.	4.50	0.75	1.02	0.76	7.03	70	21-May	6.42	74	22-May	6.12	29-May	19.56
Barpenta	Barenbrug USA	3.09	0.53	1.24	0.43	5.29	68	7-Jun	5.52	73	12-Jun	4.95	10-Jun	15.76
Climax	check	3.12	0.53	1.15	0.43	5.23	66	1-Jun	5.33	74	1-Jun	4.37	9-Jun	14.93
	Trial Mean	3.89	0.68	1.11	0.58	6.26	69		6.19	73		5.63		
	LSD(.05)	0.29	0.10	0.22	0.10	0.52	6		0.34	6		0.29		
	CV(%)	4.9	9.8	12.7	11.3	5.4	6.1		3.7	5.0		3.4		

Timothy		2010						
Sown August 7, 2009		28-May	2-Jul	17-Aug	28-Oct	Total Season	% Stand 18-Nov	Heading Date
---- tons per acre dry matter ----								
Richmond	check	4.22	1.31	0.67	0.81	7.01	80	24-May
Tuukka	AMPAC	3.81	1.05	0.65	0.47	5.98	83	3-Jun
Climax	check	3.57	1.16	0.59	0.61	5.93	80	1-Jun
	Trial Mean	3.87	1.17	0.64	0.63	6.31	81	
	LSD(.05)	0.34	0.19	0.09	0.09	0.47	5	
	CV(%)	5.1	9.1	8.1	7.9	4.3	3.6	

Orchardgrass		2010						2009			2008		3 or 2-Yr. Total	
Sown May 4, 2007		2-Jun	30-Jun	13-Aug	18-Oct	Total Season	% Stand 23-Nov	Heading Date	Total Season	% Stand 9-Nov	Heading Date	Total Season		Heading Date
---- tons per acre dry matter ----														
Shiloh II	ProSeeds Marketing	3.06	1.31	1.26	1.33	6.96	66	7-May	7.77	70	12-May	8.00	8-May	22.72
Potomac	check	3.15	1.25	1.09	1.29	6.78	60	7-May	7.74	65	11-May	7.80	8-May	22.32
OG0203G	Allied Seed Co., L.L.C.	3.33	1.09	1.12	1.19	6.73	64	7-May	8.00	69	13-May	7.52	13-May	22.25
Pennlate	check	3.21	1.16	1.17	1.17	6.71	61	7-May	7.96	69	13-May	7.38	11-May	22.05
Profit	AMPAC Seed Co.	3.31	1.10	1.09	1.21	6.72	63	7-May	7.49	70	13-May	7.48	13-May	21.70
Warrior II	ProSeeds Marketing	2.97	1.11	1.03	1.25	6.36	65	7-May	7.57	70	13-May	7.51	11-May	21.43
Command	Land O'Lakes	3.15	1.09	1.00	1.09	6.34	61	7-May	7.33	69	13-May	7.24	13-May	20.91
Intensiv	check	3.35	1.04	0.93	1.00	6.32	63	19-May	7.51	66	18-May	6.91	18-May	20.74
	Trial Mean	3.19	1.14	1.09	1.19	6.62	63		7.67	68		7.48		
	LSD(.05)	0.34	0.12	0.14	0.16	0.47	4		0.51	6		0.59		
	CV(%)	7.2	7.0	9.1	9.2	4.8	4.7		4.5	6.3		5.4		

Orchardgrass		2010						Leaf Tip Disease 10/19	
Sown August 7, 2009		28-May	2-Jul	17-Aug	28-Oct	Total Season	% Stand 18-Nov	Heading Date	1=low incidence 3=high incidence
---- tons per acre dry matter ----									
IS-OG 52	DLF International Seeds	4.33	1.97	1.40	1.39	9.09	76	10-May	1.6
Potomac	check	3.67	2.17	1.57	1.36	8.78	80	4-May	2.1
Profit-coated	AMPAC	3.94	1.89	1.33	1.39	8.55	74	10-May	1.6
Tekapo-coated	AMPAC	3.40	1.64	1.26	1.64	7.94	81	6-May	1.0
Profit	AMPAC	3.49	1.88	1.11	1.13	7.62	76	10-May	1.4
RAD-LCF21	Lewis Seed	3.28	1.91	1.02	1.35	7.56	76	19-May	1.0
Tekapo	AMPAC	2.85	1.65	1.08	1.55	7.12	80	6-May	1.3
Dividend VL	Allied Seed Co., L.L.C.	3.09	1.82	0.87	0.73	6.50	81	21-May	2.8
AMP-1MB	AMPAC	3.80	0.82	0.88	0.68	6.17	74	6-May	2.6
	Trial Mean	3.54	1.75	1.17	1.25	7.70	78		1.7
	LSD(.05)	0.34	0.20	0.22	0.22	0.75	5		0.5
	CV(%)	6.6	7.8	13.0	12.0	6.7	4.6		21.0

**Table 11: 2010 Perennial Forage Grass Yield Summary**  
(T/A - tons per acre dry matter)

\*, \*\* = significant differences among varieties at P<0.05 and P<0.01, respectively; ns = no significant differences among varieties.  
Heading date is date when 5 heads in a 3.5 x 16 foot plot were visible.

Ithaca, Tompkins Co., Sown 2007, 2008, 2009  
Soils

2007 Niagara silt loam  
2008, '09 Williamson very fine sandy silt loam

Tall Fescue		2010						2009			2008		3 or 2-Yr. Total	
Variety	Marketer	2-Jun	30-Jun	13-Aug	18-Oct	Total Season	% Stand 23-Nov	Heading Date	Total Season	% Stand 10-Nov	Heading Date	Total Season		Heading Date
Sown May 4, 2007														
---- tons per acre dry matter ----														
Select	check	3.27	1.39	1.26	1.26	7.19	69	17-May	8.47	69	18-May	8.49	18-May	24.15
RAD-ERF48	ProSeeds Marketing	3.22	1.40	1.31	1.40	7.33	65	13-May	8.37	69	18-May	8.41	16-May	24.11
Stockman	Seed Research of Oregon	3.14	1.40	1.29	1.38	7.21	65	17-May	8.33	65	18-May	8.49	18-May	24.03
Enhance	Seedway/FSG	3.08	1.38	1.21	1.26	6.94	66	19-May	8.32	69	21-May	8.41	22-May	23.68
IS-FTF 31	DLF International Seeds	3.44	1.17	1.24	1.27	7.12	65	17-May	8.19	69	18-May	8.27	16-May	23.58
KY 31-	check	3.16	1.36	1.26	1.29	7.06	69	19-May	8.20	69	21-May	8.18	22-May	23.45
KYFA9301/AR584	U of Kentucky	3.25	1.18	1.16	1.31	6.90	66	19-May	7.96	68	21-May	8.28	22-May	23.14
TF0202	Allied Seed Co., L.L.C.	2.50	1.47	1.18	1.29	6.43	65	21-May	7.81	70	22-May	8.33	22-May	22.58
BarElite	Barenbrug USA	2.43	1.17	1.01	1.18	5.79	69	21-May	7.02	71	24-May	7.15	26-May	19.96
	Trial Mean	3.05	1.32	1.21	1.29	6.89	67		8.07	69		8.23		23.19
	LSD(.05)	0.29	0.12	0.12	0.21	0.52	6		0.51	4		0.43		
	CV(%)	6.5	6.1	6.5	10.9	5.2	5.8		4.3	4.4		3.6		

Tall Fescue		2010						2009			3 or 2-Yr. Total	
Variety	Marketer	24-May	2-Jul	11-Aug	20-Oct	Total Season	% Stand 18-Nov	Heading Date	Total Season	% Stand 16-Nov		Heading Date
Sown April 25, 2008												
---- tons per acre dry matter ----												
KY 31-	check	2.53	2.55	1.28	1.49	7.86	71	19-May	8.28	80	24-May	16.13
KY 31+	check	2.24	2.45	1.39	1.53	7.61	71	21-May	8.18	83	21-May	15.79
BAR FA BE9301A	Barenbrug USA	2.20	2.44	1.22	1.61	7.47	63	21-May	7.67	70	21-May	15.14
Biariane	Barenbrug USA	2.11	2.38	0.95	1.34	6.78	69	23-May	7.30	80	27-May	14.08
	Trial Mean	2.27	2.45	1.21	1.49	7.43	68		7.86	78		
	LSD(.05)	0.16	0.21	0.17	0.23	0.46	6		0.42	4		
	CV(%)	4.5	5.4	8.7	9.7	3.9	5.5		3.3	3.2		

Tall Fescue		2010						
Variety	Marketer	25-May	1-Jul	13-Aug	19-Oct	Total Season	% Stand 18-Nov	Heading Date
Sown May 6, 2009								
---- tons per acre dry matter ----								
Goliath	AMPAC	2.07	2.02	1.65	1.58	7.32	79	17-May
Goliath-coated	AMPAC	2.21	1.84	1.57	1.60	7.23	79	17-May
KY 31 E-	check	2.09	1.94	1.54	1.62	7.19	78	19-May
IS-FTF 48	DLF International Seeds	1.88	1.92	1.55	1.65	7.00	71	21-May
KY 31 E+	check	2.04	1.96	1.55	1.45	6.99	75	21-May
Bronson	AMPAC	2.13	1.79	1.47	1.49	6.89	79	17-May
Pradel	check	2.26	1.57	0.89	0.91	5.63	73	19-May
AMP-1MF	AMPAC	2.26	1.45	0.73	0.95	5.39	73	19-May
	Trial Mean	2.12	1.81	1.37	1.41	6.70	76	
	LSD(.05)	0.18	0.18	0.28	0.25	0.64	4	
	CV(%)	6.4	7.8	15.3	13.7	7.3	3.7	

Bromegrass		2010						2009			2008		3 or 2-Yr. Total
Variety	Marketer	7-Jun	20-Aug		Total Season	% Stand 23-Nov	Heading Date	Total Season	% Stand 6-Oct	Heading Date	Total Season	Heading Date	
Sown May 7, 2007													
---- tons per acre dry matter ----													
Hakari	Barenbrug USA	3.55	1.19		4.73	54	26-May	5.40	81	27-May	6.91	29-May	17.04
York	AMPAC Seed Co.	3.38	1.68		5.06	70	18-May	5.09	77	18-May	6.36	18-May	16.51
Olga	Barenbrug USA	3.34	1.36		4.70	60	18-May	4.70	72	18-May	6.59	18-May	15.99
Doina	Barenbrug USA	3.33	1.43		4.76	59	18-May	4.49	75	18-May	6.48	18-May	15.73
Peak	Seedway/FSG	3.26	1.67		4.93	71	18-May	4.92	80	18-May	5.37	18-May	15.22
Canterbury	Barenbrug USA	2.57	0.91		3.48	30	25-May	3.54	66	27-May	5.81	26-May	12.83
	Trial Mean	3.24	1.37		4.61	57		4.69	75		6.25		
	LSD(.05)	0.33	0.24		0.29	6		0.54	5		0.50		
	CV(%)	7.6	13.2		4.8	7.9		8.8	4.8		6.1		

All varieties are smooth bromegrass except for Canterbury which is a mountain bromegrass and Hakari which is an alaska bromegrass.

**Table 11: 2010 Perennial Forage Grass Yield Summary**  
(T/A - tons per acre dry matter)

\*, \*\* = significant differences among varieties at P<0.05 and P<0.01, respectively; ns = no significant differences among varieties.  
Heading date is date when 5 heads in a 3.5 x 16 foot plot were visible.

Ithaca, Tompkins Co., Sown 2007, 2008, 2009

Soils  
2007 Niagara silt loam  
2008, '09 Williamson very fine sandy silt loam

Bromegrass		2010					2009			3 or 2-Yr.
Sown April 25, 2008		28-May	11-Aug	Total Season	% Stand 18-Nov	Heading Date	Total Season	% Stand 16-Nov	Heading Date	Total
Variety	Marketer	---- tons per acre dry matter ----								
Peak	Seedway/FSG	3.70	1.78	5.47	79	19-May	5.87	80	16-May	11.34
York	AMPAC	3.01	2.00	5.01	78	19-May	5.93	74	18-May	10.94
GRL	Barenbrug	3.05	1.54	4.58	79	19-May	5.88	76	18-May	10.46
	Trial Mean	3.25	1.77	5.02	78		5.89	77		
	LSD(.05)	0.45	0.28	0.59	8		0.50	8		
	CV(%)	8.1	9.0	6.8	5.9		4.9	5.9		

Perennial Ryegrass		2010					2009			2008		3 or 2-Yr.		
Sown May 4, 2007		2-Jun	30-Jun	13-Aug	18-Oct	Total Season	% Stand 23-Nov	Heading Date	Total Season	% Stand 10-Nov	Heading Date	Total Season	Heading Date	Total
Variety	Marketer	---- tons per acre dry matter ----												
Quartermaster	Lewis Seed Co.	3.19	0.83	0.46	0.74	5.21	48	24-May	5.27	53	24-May	6.51	26-May	17.00
Lato (Kentucky bluegrass)	Allied Seed Co., L.L.C.	2.68	1.08	0.67	0.90	5.33	69	7-May	6.85	69	11-May	4.74	8-May	16.92
Power	AMPAC Seed Co.	2.38	0.93	0.47	0.95	4.73	49	23-May	5.18	54	26-May	5.75	26-May	15.67
Aberavon	Grassland Oregon	2.68	1.03	0.47	0.63	4.81	43	24-May	4.79	50	28-May	6.00	29-May	15.60
Eurostar	Seed Research of Oregon	2.38	0.99	0.49	1.02	4.88	58	23-May	5.11	61	24-May	5.44	26-May	15.44
Troy (Kentucky bluegrass)	check	2.40	0.97	0.66	1.01	5.03	76	4-May	6.10	76	7-May	4.30	8-May	15.43
Calibra	check	2.28	0.90	0.41	0.90	4.49	51	23-May	4.97	56	24-May	5.65	26-May	15.12
Sierra	Lewis Seed Co.	2.88	0.56	0.37	0.91	4.73	58	10-May	4.91	63	18-May	4.92	11-May	14.56
Citadel	check	2.07	0.93	0.48	0.88	4.37	49	24-May	5.05	53	26-May	4.92	26-May	14.34
GO-ABS	Grassland Oregon	2.17	1.03	0.32	1.05	4.57	53	21-May	5.25	59	22-May	4.36	18-May	14.18
Tonga	AMPAC Seed Co.	2.68	0.70	0.43	0.79	4.59	51	18-May	4.52	53	18-May	4.87	18-May	13.98
GO-ABZ	Grassland Oregon	2.01	1.02	0.51	1.01	4.54	56	24-May	4.75	63	26-May	4.58	26-May	13.87
Linn	check	2.42	0.59	0.37	0.78	4.16	53	19-May	4.57	59	18-May	4.67	11-May	13.40
GO-ABM	Grassland Oregon	1.89	1.01	0.40	1.01	4.31	54	23-May	4.80	61	26-May	4.10	24-May	13.22
	Trial Mean	2.44	0.90	0.46	0.90	4.70	55		5.15	59		5.06		
	LSD(.05)	0.25	0.10	0.09	0.14	0.39	7		0.34	7		0.54		
	CV(%)	7.2	7.9	14.2	10.7	5.8	8.6		4.7	8.5		7.5		

Tetraploid perennial ryegrass - Quartermaster, Eurostar, Power, Tonga; Diploid perennial ryegrass - Sierra, GO-ABM, GO-ABS, GO-ABZ;  
Intermediate ryegrass - Aberavon

Perennial Ryegrass		2010					2009			3 or 2-Yr.			
Sown April 25, 2008		24-May	2-Jul	11-Aug	20-Oct	Total Season	% Stand 18-Nov	Heading Date	Rust 20-Oct	Total Season	% Stand 16-Nov	Heading Date	Total
Variety	Marketer	---- tons per acre dry matter ----											
Lato (Kentucky bluegrass)	Allied Seed Co., L.L.C.	2.16	1.62	0.53	0.93	5.24	76	6-May	2.0	6.52	79	11-May	11.77
Bardeby (Kentucky bluegr.)	Barenbrug	1.97	1.73	0.73	1.36	5.79	85	6-May	2.8	5.73	85	7-May	11.51
Troy (Kentucky bluegrass)	check	2.23	1.47	0.68	1.10	5.48	83	4-May	2.8	5.98	83	7-May	11.46
KenBlue (Kentucky bluegr.)	check	2.02	1.61	0.76	0.85	5.24	85	4-May	3.0	5.50	85	7-May	10.74
PSG 47 MOL	PICKSEED	2.15	1.30	0.37	0.79	4.61	69	23-May	1.4	5.73	80	24-May	10.34
Calibra	check	1.61	1.55	0.34	0.91	4.42	66	24-May	1.5	5.85	80	24-May	10.27
Cancan	DLF International Seeds	1.07	2.01	0.49	1.09	4.67	60	3-Jun	1.6	5.59	80	12-Jun	10.25
PSG AM 108	PICKSEED	1.84	1.62	0.39	0.79	4.63	69	21-May	1.5	5.11	79	24-May	9.74
Pastour	DLF International Seeds	1.21	2.05	0.46	1.01	4.73	68	1-Jun	1.4	4.95	81	2-Jun	9.68
Foxtrot	DLF International Seeds	1.30	1.89	0.38	1.04	4.61	69	3-Jun	1.6	5.03	81	2-Jun	9.64
Linn	check	2.17	1.15	0.37	0.81	4.48	76	16-May	1.9	4.96	84	18-May	9.45
PSG 06 B Lh	PICKSEED	2.52	0.97	0.42	0.65	4.56	68	23-May	1.0	4.13	80	24-May	8.69
	Trial Mean	1.85	1.58	0.49	0.94	4.87	73		1.9	5.42	81		
	LSD(.05)	0.32	0.33	0.10	0.17	0.49	5		0.41	0.61	5		
	CV(%)	12.0	14.3	13.8	12.2	7.0	4.5		15.4	7.8	4.4		

Tetraploid perennial ryegrass - PSG 06 B Lh, PSG 47 MOL, PSG AM 108, Calibra, -; Diploid perennial ryegrass - Cancan, Foxtrot, Pastour, Linn;

Perennial Ryegrass		2010					3 or 2-Yr.		
Sown May 6, 2009		25-May	1-Jul	13-Aug	19-Oct	Total Season	% Stand 18-Nov	Heading Date	Total
Variety	Marketer	---- tons per acre dry matter ----							
AMP-EDR1 (festulolium)	AMPAC	3.27	2.08	0.66	1.11	7.13	69	19-May	
AMP-MDR2	AMPAC	3.13	1.89	0.63	1.12	6.78	70	21-May	
Spring Green (festulolium)	check	3.20	1.96	0.55	1.07	6.77	74	17-May	
Power	AMPAC	2.49	1.77	0.73	1.30	6.29	73	21-May	
Duo (festulolium)	AMPAC	2.77	1.69	0.53	1.00	5.99	69	19-May	
Calibra	check	2.50	1.66	0.65	1.17	5.99	73	24-May	
Tonga	AMPAC	2.82	1.46	0.68	0.99	5.95	73	17-May	
Impressario	DLF International Seeds	2.53	1.54	0.60	1.15	5.82	73	19-May	
Linn	check	2.92	1.13	0.67	0.97	5.68	81	17-May	
Orantas	DLF International Seeds	1.77	1.41	0.64	1.29	5.11	78	23-May	
	Trial Mean	2.74	1.66	0.63	1.12	6.15	73		
	LSD(.05)	0.29	0.21	0.13	0.11	0.43	5		
	CV(%)	7.3	8.6	13.7	6.6	4.9	4.8		



### Corrected NDFD values - Feb. 2, 2012

#### Perennial Forage Grass Varieties - 2009 Forage Quality, Maturity and Yield at Spring Growth Boot Stage (See Table 5 below)

For the first two production years of each grass trial sown, samples for forage quality analyses were taken from each grass variety. Two samples were taken at boot stage or when seed heads were first visible. The data from these samples can be used to compare forage quality of varieties at approximately the same stage of maturity, however on different days.

Grasses increase in fiber concentration (%NDF) and decrease in fiber digestibility (%NDFd) by advancing calendar date and by increasing temperatures. Harvest grass at boot stage for optimum forage quality. Choose grass varieties first by species based in species agronomic characteristics, then by date of boot stage based on planned date of harvest, then by yield and forage quality (low fiber, high fiber digestibility). Predictions of milk per acre, milk per ton, and relative feed quality were found to be very highly correlated with %NDF and yield, thus are no longer reported.

The samples taken in 2010 will be analyzed and reported on in 2011.

**Table 5: Spring Forage Quality Data for Grass Varieties**

Trial Sown 2007 Boot Stage in 2009				Trial Sown 2007 Boot Stage in 2009			
	Date at Boot Stage	% NDF	% NDFD		Date at Boot Stage	% NDF	% NDFD
<b>Orchardgrass</b>				<b>Bromegrass</b>			
Potomac	11-May	55	82	Peak	18-May	53	79
Shiloh II	12-May	52	82	Olga	18-May	54	79
Command	13-May	53	81	York	18-May	51	82
Warrior II	13-May	53	81	Doina	18-May	54	79
Profit	13-May	52	82	Hakari	27-May	59	81
Pennlate	13-May	53	81	Canterbury	27-May	58	83
OG0203G	13-May	54	80				
Intensiv	18-May	55	79				
<b>Timothy</b>				<b>Trial Sown 2008 Boot Stage in 2009</b>			
Summit	22-May	59	75		Date at Boot Stage	% NDF	% NDFD
Derby	22-May	60	76	<b>Perennial Ryegrass and Kentucky Bluegrass</b>			
Clair	22-May	58	76	KenBlue (Kentucky bluegr.)	7-May	50	78
Climax	1-Jun	62	74	Barderby (Kentucky bluegr.)	7-May	54	81
Barpenta	12-Jun	69	67	Troy (Kentucky bluegr.)	7-May	52	80
<b>Perennial Ryegrass and Kentucky Bluegrass</b>				Lato (Kentucky bluegr.)	11-May	50	81
Troy (Kentucky bluegr.)	7-May	52	80	Linn	18-May	43	81
Lato (Kentucky bluegr.)	11-May	49	80	Calibra	24-May	45	84
Sierra	18-May	42	83	PSG 06 B Lh	24-May	44	76
Tonga	18-May	38	85	PSG 47 MOL	24-May	44	83
Linn	18-May	43	81	PSG AM 108	24-May	44	82
GO-ABS	22-May	39	87	Pastour	2-Jun	48	81
Calibra	24-May	44	82	Foxtrot	2-Jun	47	83
Eurostar	24-May	41	81	Cancan	12-Jun	54	77
Quartermaster	24-May	44	83				
Citadel	26-May	39	80	<b>Tall Fescue</b>			
GO-ABM	26-May	34	86	KY 31+	21-May	55	69
GO-ABZ	26-May	40	84	BAR FA BE9301A	21-May	50	72
Power	26-May	41	80	KY 31-	24-May	49	72
Aberavon	28-May	42	80	Bariane	27-May	54	68
<b>Tall Fescue</b>				<b>Bromegrass</b>			
IS-FTF 31	18-May	51	76	Peak	16-May	55	77
Select	18-May	53	75	GRL	18-May	57	76
RAD-ERF48	18-May	52	75	York	18-May	55	76
Stockman	18-May	49	77				
Enhance	21-May	50	76				
KY 31-	21-May	52	76				
KYFA9301/AR584	21-May	54	76				
TF0202	22-May	50	76				
BarElite	24-May	55	73				

## Corrected NDFD values - Feb. 2, 2012

### Perennial Forage Grass Varieties - 2009 Forage Quality, Maturity and Yield at Spring Growth at Harvest 1 (See Table 6 below)

Two samples were taken from each variety just prior to first harvest. The data from these samples can be used to compare forage quality of varieties on the same day, but at different stages of maturity. Varieties are sorted from earliest heading date to latest heading date within each trial.

Grass varieties that are harvested prior to boot stage such that the seed heads are not harvested in the first cutting, will have seed head emergence at the second harvest. Varieties with seed heads at second harvest can be expected to have lower forage quality at second harvest compared to a variety that does not have seed head emergence at that harvest. Samples were not taken for analyses at the second harvest.

**Table 6: 2009 Spring, First Harvest Forage Quality Data for Grass Varieties**

	Trial Sown 2007					Trial Sown 2007					
	First Harvest in 2009 - May 21			% Seed Heads at Harvest 2	2009 Aftermath Forage Yield (t/a)	First Harvest in 2009 - May 21			% Seed Heads at Harvest 2	2009 Aftermath Forage Yield (t/a)	
	Yield (t/a) Harvest 1	% NDF	% NDFD			Yield (t/a) Harvest 1	% NDF	% NDFD			
<b>Orchardgrass</b>						<b>Bromegrass - First Harvest May 27</b>					
OG0203G	2.78	59	75	1	5.22	Olga	2.15	65	70	6	2.55
Potomac	2.58	58	76	1	5.16	Doina	2.03	65	71	8	2.46
Pennlate	2.53	59	75	1	5.43	York	2.01	60	74	2	3.08
Shiloh II	2.42	60	76	1	5.34	Peak	1.89	64	72	3	3.03
Intensiv	2.41	57	77	1	5.10	Hakari	1.82	61	79	90	3.58
Command	2.41	58	75	1	4.93	Canterbury	1.36	60	81	90	2.17
Warrior II	2.32	58	78	1	5.25						
Profit	2.20	57	79	1	5.29						
<b>Timothy</b>						<b>Trial Sown 2008</b>					<b>2009</b>
Clair	2.72	58	74	2	4.17	<b>First Harvest in 2009 - May 26</b>	<b>% Seed</b>	<b>Aftermath</b>			
Derby	2.71	56	77	3	4.10	<b>Yield (t/a)</b>	<b>%</b>	<b>%</b>	<b>Heads at</b>	<b>Forage</b>	
Summit	2.47	54	78	2	3.95	<b>Harvest 1</b>	<b>NDF</b>	<b>NDFD</b>	<b>Harvest 2</b>	<b>Yield (t/a)</b>	
Climax	2.03	50	83	14	3.30	<b>Perennial Ryegrass and Kentucky Bluegrass</b>					
Barpenta	1.70	47	87	58	3.82	PSG 47 MOL	2.46	43	78	78	3.27
<b>Perennial Ryegrass</b>						Linn	2.26	54	71	5	2.70
Lato (Kentucky bluegr.)	2.11	55	74	0	4.74	Lato (Kentucky bluegr.)	2.15	60	66	1	4.37
Troy (Kentucky bluegr.)	2.09	56	73	0	4.02	Troy (Kentucky bluegr.)	2.13	63	63	1	3.85
Linn	1.33	42	81	65	3.24	PSG 06 B Lh	1.95	41	76	73	2.18
Quartermaster	1.21	39	88	95	4.06	Calibra	1.80	42	81	14	4.05
Sierra	1.18	45	82	85	3.73	PSG AM 108	1.72	42	80	9	3.39
Tonga	1.17	38	84	79	3.35	KenBlue (Kentucky bluegr.)	1.70	61	61	1	3.80
Calibra	1.14	37	88	90	3.83	Barderby (Kentucky bluegr.)	1.51	63	61	1	4.22
Eurostar	1.01	35	84	94	4.10	Foxtrot	1.18	41	83	65	3.86
GO-ABS	0.97	35	88	81	4.28	Pastour	1.05	42	82	65	3.90
Aberavon	0.93	36	87	94	3.86	Cancan	1.03	41	80	73	4.55
GO-ABZ	0.93	34	93	83	3.82						
Power	0.93	38	86	94	4.25	<b>Tall Fescue</b>					
Citadel	0.87	38	89	90	4.18	KY 31+	2.34	53	68	1	5.94
GO-ABM	0.83	33	87	88	3.98	KY 31-	2.34	54	68	1	5.84
<b>Tall and Meadow Fescue</b>						BAR FA BE9301A	2.00	51	71	1	5.67
Select	2.16	53	73	1	6.31	Bariane	1.97	52	70	1	5.33
IS-FTF 31	2.15	52	73	1	6.04						
RAD-ERF48	2.15	52	73	1	6.21	<b>Bromegrass</b>					
KYFA9301/AR584	2.02	50	76	1	5.93	GRL	2.60	66	69	1	3.28
Enhance	2.02	47	75	1	6.30	York	2.55	63	69	1	3.37
Stockman	1.98	52	73	1	6.34	Peak	2.46	65	70	1	3.42
KY 31-	1.90	48	74	1	6.30						
TF0202	1.82	45	78	1	5.99						
BarElite	1.48	49	75	5	5.54						

Table 14: Annual Ryegrass Trials, and Perennial Cool Season Grass Trials Sown in 2010.

Variety	Marketing Company	2010			2009		Variety	Marketing Company	2010 3-Nov	Stand 16-Nov	2-Yr. Total	Leaf Tip Disease
		Total Season	% Stand 16-Nov	Heading Date	Total Season	T/A						
<b>Annual Ryegrass</b>							<b>Timothy</b>					
Sown May 6, 2009							Sown May 11, 2010					
AMP-1IR	AMPAC	8.59	64	17-May	4.55	13.14	Dainiai	Allied Seed	0.41	86		
Bruiser	AgriCulver / AMPAC	5.46	45	17-May	5.27	10.73	Climax	check	0.39	94		
A 108	PICKSEED	5.69	74	21-May	3.23	8.92	Richmond	check	0.55	91		
Feast II	check	7.30	60	21-May	5.49	12.79	LSD(.05)		0.19	4		
Feast II	AgriCulver / AMPAC	7.33	59	21-May	5.72	13.06	<b>Orchardgrass</b>					
Fantastic	AgriCulver / AMPAC	4.75	33	17-May	5.12	9.87	Sown May 11, 2010					
PSG 29 BF 06	PICKSEED	8.21	54	21-May	4.17	12.38	IS-OG 53	DLF Trifolium	1.21	91		1.0
06 B Lh	PICKSEED	8.63	63	21-May	3.91	12.54	Persist	Smith Seeds	1.08	94		1.5
MX 108	PICKSEED	7.71	55	21-May	3.54	11.26	Anksta	Allied Seed Co., L.L.C.	0.92	95		3.0
LSD(.05)		0.61	12		0.52		Dg12R01	Barenbrug	1.33	95		1.5
<b>Annual Ryegrass</b>							<b>Tall Fescue</b>					
Sown May 11, 2010							Sown May 11, 2010					
Thunder	Burlingham Seeds	2.76	95				Cajun II	Smith Seeds	1.40	94		
PS07-2 AR	PICKSEED	1.98	93				BarElite	Barenbrug	1.47	94		
PS-Lm-09-2	PICKSEED	2.29	94				KY 31 E-	check	1.46	95		
Max	PICKSEED	1.99	93				KY 31 E+	check	1.47	95		
AE 110	PICKSEED	2.48	91				LSD(.05)		0.12	2		0.7
Big Boss (4n)	Smith Seeds	3.20	95				<b>Bromegrass</b>					
Ed (2n)	Smith Seeds	3.20	95				Sown May 11, 2010					
Feast II	check	3.18	93				BAR BcF1FRRL	Barenbrug	0.86	91		
LSD(.05)		0.46	4				BAR BiF1GRL	Barenbrug	0.61	95		
<b>Perennial Ryegrass</b>							<b>Bromegrass</b>					
Sown May 11, 2010							Sown May 11, 2010					
Polim	DLF Trifolium	1.24	94				Hakari	Barenbrug	1.34	90		
Kentaur	DLF Trifolium	1.29	93				AC Knowles	Barenbrug	0.55	94		
Verseka	Allied Seed Co., L.L.C.	0.93	91				Peak	Check	0.49	91		
Elena DS	Allied Seed Co., L.L.C.	1.06	91				LSD(.05)		0.16	6		
Linn	check	0.76	95									
Calibra	check	0.98	94									
LSD(.05)		0.17	3									

Table 15: Marketing Companies for Grass Varieties

Marketing Company	Marketing Co. Phone Number	Web or E-mail Address
AgriCulver	1-800-836-3701	<a href="http://www.agriculverseeds.com">www.agriculverseeds.com</a>
Allied Seed Co., L.L.C.	1-208-250-6321	<a href="http://www.alliedseed.com">www.alliedseed.com</a>
AMPAC Seed Company	1-800-547-3230	<a href="http://www.ampacseed.com">www.ampacseed.com</a>
Barenbrug USA	1-800-547-4101	<a href="http://www.barusa.com">www.barusa.com</a>
Burlingham Seeds	1-503-623-2306	<a href="http://www.burlinghamseeds.com">www.burlinghamseeds.com</a>
Cropmark Seeds Ltd		<a href="http://www.cropmark.co.nz">www.cropmark.co.nz</a>
DLF International Seeds	1-541-369-2251	<a href="http://www.dlfis.com">www.dlfis.com</a>
Grassland Oregon	1-503-566-9900	
Land O' Lakes	1-800-328-9680	<a href="http://www.landolakesinc.com">www.landolakesinc.com</a>
Lewis Seed Co.	1-541-466-3704	<a href="http://www.lewisseed.com/">www.lewisseed.com/</a>
Pennington Seed	1-800-285-SEED	<a href="http://www.penningtonseed.com">www.penningtonseed.com</a>
PICKSEED	1-705-878-9240	<a href="http://www.pickseed.com/ECanada/index.html">http://www.pickseed.com/ECanada/index.html</a>
ProSeeds Marketing	1-541-928-9999	<a href="http://www.proseeds.net">www.proseeds.net</a>
Seed Research of Oregon	1-800-253-5766	<a href="http://www.sroseed.com">www.sroseed.com</a>
Seedway/FSG	1-800-836-3710	<a href="http://www.seedway.com">www.seedway.com</a>
Smith Seeds		<a href="http://www.smithseed.com/contact.shtml">www.smithseed.com/contact.shtml</a>

Estimates of potential corn yields by soil type in tables 1-8 are from the New York state corn N calculator: <http://nmsp.cals.cornell.edu/software/calculators.html>