

2005 UPES

Small Grain and Forage Performance Trials

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Introduction

In 2005 the Upper Peninsula Experiment Station conducted small grain, alfalfa and grass variety trials. The purpose of these trials is to evaluate each variety to determine which consistently performs the best in the climatic conditions of the Central Upper Peninsula. The results shown are the average of four replications grown in close proximity to each other. Two or more plots of the same variety in the same field may produce somewhat different results because of variability in the soil and other environmental factors. Replication and randomization of the entries are two methods used to account for this variation. The value calculated as the “least significant difference” or “LSD” is the amount that an individual hybrid would have to differ from another hybrid in the same test to be considered significantly different from that hybrid. The CV, or coefficient of variation, is indicative of a trial’s precision. Trials with low levels of error variation have lower CV values. Each of the trials was treated with the recommended seeding, fertility and herbicide rates per species. In 2005 Chatham experienced a hotter, dryer summer than normal. See weather information at bottom of page 2. . For state wide variety trial results on the Web use this address:

Michigan Barley Variety Trial 2005 Upper Peninsula Exp. Sta., Chatham

Variety	% Moisture	Test wt (lbs/bu)	Ht (in)	Bu/Acre*	'04-'05 avg	Type	Origin
Bowers	12.7	45.5	22.0	49.9	63.8	Feed	Michigan
Drummond	13.4	46.2	20.5	44.3	62.0	Malting	North Dakota
Hazen	13.6	46.5	22.2	44.3	-	Feed	North Dakota
Kewaunee	12.9	45.5	21.7	43.7	60.6	Feed	Wisconsin
Lacey	13.0	46.7	21.7	55.0	65.6	Malting	Minnesota
Legacy	13.5	47.0	22.5	40.3	58.0	Malting	Busch-Ag Resources Inc
MN Brite	13.1	47.2	21.7	48.4	55.7	Feed	Minnesota
Robust	12.7	46.0	22.2	49.0	58.8	Malting	Minnesota
Royal	12.7	45.5	17.5	41.6	55.0	Feed	Minnesota
Stander	13.0	45.5	19.7	40.9	58.0	Feed	Minnesota
Tradition	12.9	46.7	20.2	48.5	66.4	Malting	Busch-Ag Resources Inc
Mean	13.0	46.2	21.1	46.0	60.3		
CV%	3.8	2.3	6.9	16.5	9.7		
LSD 5%	0.7	1.5	2.1	11.0	8.4		

*Yield adjusted to 14.5% moisture

Design: RCB, plot size 3 x 20', (3 x 18' harvested)

Harvested: 8-8-05

Seeded: 5-18-2005

Herbicide: 1.5 pts of Buctril

Soil type: Eben very cobbly sandy loam

Fertility: 300 lbs 34-0-0

Michigan Oats Variety Trial 2005
Upper Peninsula Exp. Sta., Chatham

Variety	% Moisture	Test wt (lbs/bu)	Ht (in)	Bu/acre*	'04-'05 avg	Origin
Drumlin	15.0	34.0	26.0	58.2	83.6	Wisconsin
Esker	14.1	34.0	24.7	66.5	79.5	Wisconsin
Gem	14.4	33.2	28.7	69.5	80.3	Wisconsin
Hi-Fi	15.3	32.5	27.5	67.2	81.3	North Dakota
Ida	14.2	34.0	27.0	64.4	94.5	Michigan
Kame	14.5	34.0	23.5	52.0	74.2	Wisconsin
Killdeer	14.3	35.2	23.0	62.3	80.5	North Dakota
Leonard	14.9	33.0	27.7	65.5	82.6	Minnesota
Newdak	14.5	32.2	26.0	62.5	88.2	North Dakota/New York
Ogle	14.1	32.2	25.2	61.8	77.8	Illinois
Richard	14.3	33.2	28.0	68.1	86.3	Minnesota
Sesqui	14.5	34.7	23.5	64.8	-	Minnesota
Vista	14.5	33.5	28.2	65.4	88.5	Wisconsin
Wabasha	14.8	35.2	26.7	50.6	73.3	Minnesota
Mean	14.5	33.6	26.1	62.7	82.3	
CV%	2.8	1.8	5.7	16.1	10.7	
LSD 5%	0.5	0.8	2.1	14.5	12.6	

*Yield adjusted to 14% moisture

Design: RCB, plot size 3 x 20', (3 x 18' harvested)

Harvested: 8-11-05

Seeded: 5-18-2005

Herbicide: 1.5 pts of Buctril

Soil type: Eben very cobbly sandy loam

Fertility: 225 lbs 34-0-0

2005 Precipitation (inches)

*30 Year average

Month	Chatham			Month	Chatham		
	Normal*	2005	dev		Normal*	2005	dev
Apr	2.46	2.37	-0.09	Aug	3.55	1.92	-1.63
May	3.15	1.93	-1.22	Sept	4.16	4.14	-0.02
June	3.61	1.11	-2.5	Oct	3.24	3.29	0.05
July	3.56	3.22	-0.34	Total	23.73	17.98	-5.75

**Michigan State Alfalfa Variety Trial
Upper Peninsula Exp. Sta., Chatham**

Sown June 2003

Non-irrigated

Entry	17-Jun	21-Jul	12-Sep	2005 Total	2004 Total	2-yr. Total
DM tons/acre						
WL 357 HQ	1.56	1.24	0.31	3.11	4.72	7.83
Radiant	1.74	0.89	0.26	2.88	4.46	7.34
Pioneer 54H91	1.57	0.88	0.26	2.70	4.60	7.30
Starbuck	1.60	0.96	0.27	2.82	4.42	7.24
Prolific	1.61	0.94	0.27	2.82	4.41	7.23
Pioneer 54V46	1.66	0.92	0.31	2.89	4.31	7.20
Ameristand 403T	1.74	0.82	0.21	2.77	4.33	7.10
Garst 620	1.50	0.89	0.27	2.66	4.39	7.05
Attention	1.61	0.82	0.22	2.64	4.41	7.05
WL 319 HQ	1.64	0.83	0.24	2.70	4.32	7.02
Baralfa 42	1.55	0.82	0.26	2.63	4.39	7.02
Baralfa 32IG	1.51	0.97	0.28	2.76	4.20	6.96
Dynamic	1.46	0.78	0.25	2.49	4.25	6.74
WRV 931	1.43	0.80	0.23	2.46	4.05	6.51
LHR100	1.30	0.69	0.22	2.21	4.21	6.42
Extend	1.41	0.67	0.20	2.28	4.10	6.38
Vernal	1.17	0.76	0.23	2.16	4.02	6.18
Skiveru	1.24	0.49	0.14	1.86	3.39	5.25
Mean	1.51	0.84	0.24	2.60	4.28	6.88
CV%	14	18	20	13	6	7
LSD 5%	0.31	0.22	0.07	0.49	0.33	0.69

Location: Upper Pen. Exp. Sta., Alger Co.
 Design: RCB, plot size: 3 x 24 (3 x 21 harvested)
 Seeded: 6/2/2003, 20 lbs/A PLS.
 Soil Type: Eben very cobbly sandy loam
 Cuttings: Three in 04-05
 Fertility: 0-63-189 Split application

2001 UPES Perennial Grass Variety Trial

Alger Co.

Sown Aug 2001

Non-irrigated

Species/Marketer	Variety	Winter Injury*					2005	2004	2003	3-yr.
			1- Jun	10- Jul	23- Aug	29- Sep	Total Yield	Total Yield	Total Yield	Total Yield
DM tons/acre										
Festulolium										
DLF- Jenks	Hykor	1.0	0.79	0.56	0.87	0.79	3.01	3.90	2.15	9.06
AMPAC Seed Co.	Duo	4.3	0.64	0.47	0.45	0.65	2.21	3.23	1.25	6.69
Orchardgrass										
DLF-Jenks	Amba	2.0	1.05	0.37	0.46	0.60	2.48	3.58	1.85	7.91
AMPAC Seeds Co.	Tekapo	3.0	0.72	0.64	0.60	0.77	2.73	3.85	1.55	8.13
DLF-Jenks	Sparta	1.3	1.01	0.56	0.63	0.54	2.74	3.51	1.57	7.82
DLF-Jenks	Niva	1.7	0.97	0.67	0.70	0.57	2.91	3.33	1.59	7.83
P. Ryegrass										
Barenbrug	Mara (2n)	4.0	0.58	0.36	0.62	0.55	2.11	4.51	1.51	8.13
DLF-Jenks	Calibra (4n)	3.3	0.58	0.58	0.51	0.86	2.53	3.65	0.93	7.11
AMPAC Seed Co.	Tonga (4n)	4.0	0.61	0.43	0.48	0.54	2.06	3.29	1.10	6.45
AMPAC Seed Co.	Aries (2n)	5.0	0.09	0.32	0.00	0.15	0.56	2.29	1.04	3.89
AMPAC Seed Co.	Quartet (4n)	5.0	0.15	0.33	0.11	0.43	1.02	3.02	0.62	4.66
AMPAC Seed Co.	Maverick Gold (4n)	5.0	0.00	0.38	0.00	0.28	0.66	2.04	0.93	3.63
Tall Fescue										
AMPAC Seed Co.	Bronson	1.3	0.65	0.65	0.92	0.71	2.93	3.84	2.06	8.83
Barenbrug	Barolex	2.3	0.78	0.62	0.84	0.81	3.05	4.25	1.41	8.71
AMPAC Seed Co.	K5666V	2.8	0.32	0.51	0.72	0.74	2.29	3.66	1.42	7.37
Mean		3.1	0.60	0.48	0.53	0.61	2.22	3.46	1.39	7.08
LSD (0.05)		0.8	0.23	0.36	0.21	0.23	0.56	0.86		

Location: Upper Pen. Experiment Station, Chatham

Design: RCB, plot size 6' x 15'

Seeded: August 2001

Soil Type: Eben very cobbly sandy loam

Fertilizer: 50 lbs/acre of actual N at green-up and after each harvest

*Visual Rating of Winter Injury (1-5 scale; 1=least injury)