

2008 Durum Variety Trial at Hettinger

Variety	Days to	Plant	Test	Grain	----- Grain Yield -----			Average Yield		
	Head	Height	Lodging	Weight	Protein	2006	2007	2008	2 year	3 year
	*	inches	0 - 9**	lbs/bu	%	----- Bushels per acre -----				
Alzada	77	38	2.0	55.7	17.1	35.6	40.7	39.1	39.9	38.5
Grenora	80	38	1.2	54.4	17.5	35.3	36.9	33.3	35.1	35.2
Ben	80	40	2.5	53.7	17.8	34.9	40.1	28.2	34.2	34.4
Alkabo	81	39	1.2	54.2	17.5	30.5	37.5	30.3	33.9	32.8
Dilse	81	42	2.2	55.2	17.7	30.9	37.7	28.4	33.0	32.3
Pierce	80	40	2.2	54.0	17.4	32.2	36.3	27.5	31.9	32.0
Mountrail	82	40	1.5	51.9	17.9	34.5	38.4	23.2	30.8	32.0
Divide	82	39	2.2	54.2	17.2	34.2	30.7	30.3	30.5	31.7
Rugby	82	40	1.8	55.6	16.7	31.1	30.1	27.3	28.7	29.5
AC Commander	81	37	1.0	56.0	15.6		43.3	45.1	44.2	
DG Star	78	40	1.5	55.8	17.2		37.6	37.1	37.4	
AC Navigator	80	39	2.0	55.8	16.9		37.1	37.5	37.3	
Maier	81	39	1.8	55.7	16.4		40.6	31.0	35.8	
Lebsock	79	40	1.0	53.4	16.8	33.4		33.8	33.6	
Grande D'oro	80	40	1.2	55.4	17.6	36.8		28.1	32.4	
Strongfield	82	42	1.8	54.1	17.4	30.2		32.2	31.2	
AC Napoleon	81	40	1.2	54.2	17.5		33.7	25.9	29.8	
Wales	80	40	1.5	55.5	17.9			25.9		
Trial Mean	81	40	1.6	54.9	17.2	31.6	36.6	31.8	--	--
C.V. %	0.8	4.0	33.9	2.0	1.9	8.4	13.0	11.6	--	--
LSD .05	1	2	0.8	1.6	0.4	3.7	6.6	5.1	--	--
LSD .01	1	3	1.0	2.1	0.6	4.9	8.8	6.8	--	--

* Days to Head = the number of days from planting to head emergence from the boot.

** Lodging: 0 = none, 9 = lying flat on ground.

Planting Date: April 14

Harvest Date: August 13

Seeding Rate: 1.25 million live seeds / acre (approx. 2.2 bu/A).

Previous Crop: 2007 & 2006 = HRSW, 2005 = soybean.

Note: The 2008 trial sustained late season heat and moisture stress.

2008 Durum Wheat Variety Tolerance to Foliar Diseases at Hettinger

Amanda Schoch & Kayla Hutzenbiler, IPM Crops Scouts, Dickinson Res. Ext. Center

Variety	Wheat Stem Maggot	----- Tan Spot ----- Incidence	----- Severity	---- Septoria ---- Incidence	---- Severity
	%	%	%	%	%
Mountrail	0	60	2	0	0
Ben	20	40	2	0	0
Lebsock	30	20	1	0	0
Grenora	20	40	2	0	0
Divide	10	30	1	0	0
Alkabo	10	60	3	0	0
Maier	20	60	2	0	0
Pierce	0	60	4	0	0
Dilse	20	50	4	0	0
Alzada	20	90	3	80	2
AC Navigator	20	60	2	40	2
Ac Napoleon	20	50	5	30	1
AC Commander	0	60	2	30	1
Rugby	40	70	3	50	2
DG Star	20	60	3	50	2
Wales	30	90	4	20	1
Grande Doro	10	60	3	30	1
Strongfield	10	30	1	30	2

Wheat Stem Maggot = percent of stems infected with maggot (white heads).

Disease Incidence = percent of plants infected with disease.

Disease Severity = percent of flag leaf area infected by disease.

Date of observations: July 16 – soft dough stage

Planting Date: April 14

Previous Crop: hrsw

North Dakota durum wheat variety descriptions, agronomic traits, 2008.

Variety	Agent or Origin ¹	Year Released	Chaff Color	Height	Straw Strength	Maturity	Reaction to Disease ²			
							Stem Rust	Leaf Rust	Foliar Disease	Scab
AC Avonlea	Can.	1997	white	med.	med.	med.	R	R	MS	S
AC Commander	Can.	2002	white	s.dwf.	med.	med.	R	R	MS	NA
AC Melita	Can.	1995	white	tall	med.	med.	R	NA	NA	S
AC Morse	Can.	1996	white	s.dwf.	strong	med.	R	R	M	NA
AC Napoleon	Can.	2001	white	s.dwf.	med.	med.	R	R	S	NA
AC Navigator	Can.	1999	white	s.dwf.	weak	med.	R	R	M	S
AC Pathfinder	Can.	1999	white	med.	weak	med.	R	R	M	S
Alkabo	ND	2005	white	med.	v.strong	med.	R	R	M	MS
Alzada	WB	2004	white	s.dwf	strong	early	R	R	S	VS
Belzer	ND	1997	white	tall	med.	late	R	R	M	MR
Ben	ND	1996	white	med.	strong	med.	R	R	MR	S*
Cando	ND	1975	tan	s.dwf.	v.strong	med.	R	R	M	VS
DG Max	DGP	2008	white	med.	strong	med.	R	MR	MR	MS
Dilse	ND	2002	white	med.	strong	late	R	R	M	MS
Divide	ND	2005	white	med.	strong	med.	R	R	M	MR
Dressler	AgriPro	1996	white	tall	med.	med.	R	MR	NA	VS
Fjord	AgriPro	1986	white	tall	strong	m.early	R	R	M	S
Grande D'Oro	WB/DGP	2005	white	med.	strong	med.	R	R	M	NA
Grenora	ND	2005	white	med.	strong	med.	R	R	M	MS
Kari	AgriPro	1998	white	med.	strong	med.	R	R	M	S
Kyle	Can.	1984	white	tall	weak	med.	R	MR	M	NA
Laker	WB	1985	white	s.dwf.	strong	med.	R	MR	S	S
Lebsock	ND	1999	white	med.	strong	med.	R	R	M	MS
Lloyd	ND	1983	white	s.dwf.	v.strong	med.	R	MR	S	VS
Maier	ND	1998	white	med.	strong	m.late	R	R	M	S*
Medora	Can.	1983	white	tall	strong	m.early	R	R	MS	VS
Monroe	ND	1985	white	tall	med.	early	R	R	M	VS
Mountrail	ND	1998	white	med.	strong	late	R	R	M	S*
Munich	ND	1995	white	med.	v.strong	med.	R	R	MR	S*
Pierce	ND	2001	white	med.	m.strong	med.	R	R	MS	S
Plaza	ND	1999	white	s.dwf.	v. strong	late	R	R	M	MS
Plenty	Can.	1990	white	tall	weak	late	R	R	MR	MS
Primo D'Oro	WB/DGP	2004	white	tall	med.	m.early	R	R	MS	NA
Renville	ND	1988	white	tall	med.	med.	R	R	M	S*
Rugby	ND	1973	tan	tall	strong	m.early	R	R	MR	S*
Strongfield	Can.	2004	white	med.	med.	med.	R	R	MS	NA
Vic	ND	1979	white	tall	med.	m.early	R	R	MR	S*
Voss	AgriPro	1994	white	s.dwf.	v.strong	med.	R	MR	MS	S
Wales	Westbred	2008	white	med.	m.strong	med.	R	R	M	S*

1 Refers to agent or developer: WB = Westbred, ND = North Dakota, DGP = Dakota Growers Pasta.

2 R = resistant; MR = moderately resistant (slow rusters); M = intermediate; MS = moderately susceptible; S = susceptible; VS = very susceptible; Foliar Disease = reaction to tan spot and septoria leaf spot complex. Letter ratings for head blight (scab) based on visual head symptoms. * Indicates yields and/or quality often have been higher than would be expected based on visual symptoms. NA = Not adequately tested.

2008 Durum Variety Trial - Continuously Cropped - No-till Scranton

Cooperators: Neal and Justin Freitag, Scranton

Variety	Plant Height	Test Weight	Grain Protein	---- Grain Yield ----			Average Yield		
	inches	lbs/bu	%	2006	2007	2008	2 yr	3 yr	
				----- Bushels per acre -----					
Alkabo	25	57.4	19.1	54.3	26.7	17.9	22.3	33.0	
Divide	25	57.0	19.2	52.1	28.4	17.8	23.1	32.8	
Mountrail	23	56.1	19.7	55.2	21.0	16.6	18.8	30.9	
Grenora	23	55.0	19.3	55.8	18.2	18.3	18.2	30.8	
Ben	28	54.9	19.8	53.1	21.9	15.2	18.6	30.1	
Lebsock	25	57.9	19.0	52.3	--	20.2			
Trial Mean	25	56.4	19.4	53.8	23.3	17.6	--	--	
C.V. %	3.8	3.6	1.9	3.9	9.1	16.2	--	--	
LSD .05	1	NS	0.6	NS	3.3	NS	--	--	
LSD .01	2	NS	NS	NS	4.6	NS	--	--	

NS = no statistical difference between varieties.

Planting Date: April 14, 2008

Harvest Date: August 5, 2008

Seeding Rate: 1.25 million live seeds / acre (approx. 2.2 bu/A).

Previous Crop: 2005 & 2006 = hrww, 2007 = hrsw.

Note: The 2008 trial sustained heat and moisture stress.

2008 Durum Variety Trial - Continuously Cropped - No-till Regent

Cooperators: August and Perry Kirschmann, Regent

Variety	Plant Height	Test Weight	Grain Protein	---- Grain Yield ----			Average Yield		
	inches	lbs/bu	%	2006	2007	2008	2 yr	3 yr	
				----- Bushels per acre -----					
Grenora	21	57.8	15.6	35.1	55.6	10.5	33.0	33.7	
Alkabo	24	--	15.6	29.8	52.2	8.9	30.6	30.3	
Mountrail	23	51.7	16.4	29.7	47.2	10.0	28.6	30.0	
Divide	24	56.6	15.5	31.1	46.7	10.0	28.4	29.3	
Ben	27	58.3	17.2	29.7	45.2	11.5	28.4	28.8	
Lebsock	23	--	15.8	31.6	--	7.1			
Trial Mean	24	56.1	16.1	31.2	49.4	9.7	--	--	
C.V. %	5.0	--	14.1	5.3	4.7	50.6	--	--	
LSD .05	2	--	NS	2.5	3.6	NS	--	--	
LSD .01	2	--	NS	3.5	5.0	NS	--	--	

NS = no statistical difference between varieties.

Planting Date: April 21, 2008

Harvest Date: August 8, 2008

Seeding Rate: 1.25 million live seeds / acre (approx. 2.2 bu/A).

Previous Crop: 2005, 2006 & 2007 = hrsw.

Note: The 2008 trial sustained severe heat and moisture stress.

2008 Durum Variety Trial - Continuously Cropped - No-till Mandan

Cooperator: USDA-ARS, Mandan

Variety	Plant Height	Test Weight	Grain Protein	---- Grain Yield ----			Average Yield		
	inches	lbs/bu	%	2006	2007	2008	2 yr	3 yr	
				----- Bushels per acre -----					
Ben	42	55.3	15.5	28.6	61.6	55.1	58.4	48.4	
Alkabo	39	55.5	14.7	28.1	56.1	60.2	58.2	48.1	
Mountrail	40	54.1	15.7	27.3	59.6	56.9	58.2	47.9	
Grenora	37	54.5	15.0	25.7	57.3	57.7	57.5	46.9	
Divide	40	54.9	15.6	26.7	54.2	55.8	55.0	45.6	
Lebsock	40	56.0	15.5	27.5	--	57.0			
Trial Mean	40	55.0	15.3	27.3	57.8	57.1	--	--	
C.V. %	2.7	1.2	2.7	7.6	4.5	6.0	--	--	
LSD .05	2	1.0	0.6	NS	4.9	NS	--	--	
LSD .01	2	1.4	NS	NS	NS	NS	--	--	

NS = no statistical difference between varieties.

Planting Date: April 22, 2008

Harvest Date: August 12, 2008

Seeding Rate: 1.25 million live seeds / acre (approx. 2.2 bu/A).

Previous Crop: 2005 & 2006 = hrww, 2007 = hrsw.