



North Dakota Barley, Oat, Rye and Flax

Variety Trial Results for 2005 and Selection Guide

Compiled by:

Joel K. Ransom and Duane R. Berglund

Extension agronomists

Barley, oat, rye and flax varieties are tested each year at multiple sites throughout North Dakota. The relative performance of these varieties is shown in table form. Variety performance data are used to provide variety recommendations to producers.

Some varieties may not be included in the tables because of insufficient testing, lack of seed availability or they offer no yield or disease advantage over similar varieties. Additional data from county sites are available at www.ag.ndsu.nodak.edu/aginfo/variety/index.htm and from each Research Extension Center. Descriptions of the most commonly grown varieties in the region are included for informational purposes. To decrease the potential of making errors when choosing a variety, use data combined from multiple locations and years.

Information contained in this publication is based on research conducted by the following Research Extension Center scientists, plant breeders, cereal scientists and plant pathologists.

Rich Horsley – barley breeder, Fargo
Jerry Franckowiak – barley breeder, Fargo
Pat Carr – agronomist, Dickinson
Blaine Schatz – agronomist, Carrington
Steve Zwinger – agronomist, Carrington
Eric Eriksmoen – agronomist, Hettinger
Mike McMullen – oat breeder, Fargo

Bryan Hanson – agronomist, Langdon
Jim Hammond – flax breeder, Fargo
Mark Halvorson – agronomist, Minot
Stephen Neate – plant pathologist, Fargo
Neil Riveland – agronomist, Williston
Paul Schwarz – cereal scientist, Fargo
Tim Friesen – pathologist, USDA, Fargo

S
544.3
N9
A8
no. 1049

NDSU
Extension Service

North Dakota State University, Fargo, North Dakota 58105

NOVEMBER 2005

Barley, oat, rye and flax varieties currently grown in North Dakota are described in the following tables. Successful production of these crops depends on numerous factors, including selecting the right variety for a particular area. The information included in this publication is meant to aid in selecting that variety or group of varieties. Characteristics to evaluate in selecting a variety are yield potential in your area; test weight; straw strength and plant height; reaction to important diseases; and maturity. Selecting varieties with good quality also is important to maintain market recognition.

When selecting a top-yielding variety, use data that summarizes several years and locations. Choose the variety that on average performs the best at multiple locations near you during several years.

Presentation of data for the entries tested does not imply approval or endorsement by the authors or agencies conducting the test. North Dakota State University approves the reproduction of any table in the publication only if no portion is deleted, if appropriate footnotes are given, and if the order of the data is not rearranged.

List of Tables

- Table 1. 2005 North Dakota barley variety descriptions.
- Table 2. Yield and test weight of barley varieties at two locations in eastern North Dakota, 2003-05.
- Table 3. Plump and protein of barley varieties at two locations in eastern North Dakota, 2005.
- Table 4. Yield and test weight of barley varieties at four locations in western North Dakota, 2003-05.
- Table 5. Plump and protein of barley varieties at four locations in western North Dakota, 2005.
- Table 6. 2005 North Dakota oat variety descriptions.
- Table 7. Yield and test weight of oat varieties at three locations in eastern North Dakota, 2003-05.
- Table 8. Yield and test weight of oat varieties at four locations in western North Dakota, 2003-05.
- Table 9. 2005 North Dakota winter rye variety descriptions.
- Table 10. Yield and test weight of winter rye varieties at three locations in North Dakota, 2003-05.
- Table 11. 2005 North Dakota flax variety descriptions.
- Table 12. Yield and test weight of flax varieties at two locations in eastern North Dakota, 2003-05.
- Table 13. Yield and test weight of flax varieties at two locations in western North Dakota, 2003-05.

Table 1. 2005 North Dakota barley variety descriptions.

											Reaction to Disease ³			
Variety	Use ¹	Origin	Year Released	Awn Type ²	Rachilla hair length ⁶	Aleurone Color	Height	Straw Strength	Relative Maturity	Stem Rust	Loose Smut	Spot Blotch	Net Blotch	
Six-rowed														
Azure	M/F	ND	1982	S	L	blue	med.	m.strg.	m.early	S	S	MR-R	MS-S	
Drummond	M/F	ND	2000	S	L	white	m.short	v.strg.	med.	S	S	MR-R	MS-S	
Excel	M/F	MN	1990	S	L	white	m.short	strg.	med.	S	S	MR-R	MS-S	
Foster	M/F	ND	1995	S	L	white	m.short	strg.	med.	S	S	MR-R	MS-S	
Hazen	F	ND	1984	S	L	white	med.	m.strg.	med.	S	S	MR-R	MS-S	
Lacey	M/F [†]	MN	1999	S	S	white	m.short	strg.	med.	S	S	MR-R	MS-S	
Legacy	M/F [†]	BARI	2000	S	L	white	med.	strg.	m.late	S	S	MR-R	MS-S	
MNBrite*	F	MN	1997	S	S	white	tall	med.	early	S	S	MR-R	MS-S	
Morex	M/F	MN	1978	S	S	white	tall	med.	early	S	S	MR	S	
Robust	M/F	MN	1983	S	S	white	med.	m.strg.	med.	S	S	MR-R	MS-S	
Stander	F	MN	1993	S	S	white	m.short	v.strg.	m.late	S	S	MR-R	MS-S	
Stellar-ND	MP/F	ND	2005	S	L	white	m.short	v.strg.	med.	S	S	MR-R	MS-S	
Tradition	M/F [†]	BARI	2003	S	L	white	m.short	v.strg.	med.	S	S	MR-R	MS-S	
Two-rowed														
AC Metcalfe [†]	M	Can	1997	R	L	white	med.	med.	late	S	NA	MS	MS	
Bowman	F	ND	1984	S	L	white	m.short	med.	early	S	S	MS-S	S-MS	
Conlon ⁴	M/F [†]	ND	1996	S	L	white	m.short	med.	early	S	S	MS	MR-R	
Eslick	F	MT	2003	R	L	white	med.	m.weak	m.late	S	NA	MS	NA	
Gallatin	F	MT	1986	R	L	white	med.	med.	late	S	S	MS-S	MS	
Harrington ⁵	F	Can.	1981	R	L	white	med.	m.weak	v.late	S	S	S	MS	
Haxby	F	MT	2003	R	L	white	med.	med.	med.	S	NA	MS	NA	
Logan	F	ND	1995	S	L	white	med.	strg.	med.	S	S	MR	MR	
Rawson	F	ND	2005	R	L	white	med.	med.	med.	S	S	MR	MS	
Stark	F	ND	1991	S	L	white	m.tall	med.	late	S	S	S-MS	MS-S	
Valier	F	Can	1999	R	L	white	Med.	m.weak	m.late	S	NA	MS	NA	
Specialty														
Wanubet	SP	MT	1990	R	L	white	med.	weak	late	S	S	S	S	

[†]Not being used by all major U.S. brewers.

*Moderately resistant to Fusarium head blight

¹ M = malting; F = feed; SP = special uses (hullless), MP = malt status pending

² Rough or smooth awned.

³ R = resistant; MR = moderately resistant; MS = moderately susceptible; S = susceptible; N/A = not available.

⁴ Lower DON accumulations than other varieties tested.

⁵ Recommended as a malting barley in western U.S.

⁶ S = short, L = long

Varieties in bold were released in 2005.

Table 2. Yield and test weight of barley at two locations in eastern North Dakota, 2003-05.

Variety	Carrington			Langdon			Average eastern N.D.		
	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr
	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A
Six-rowed									
Drummond	46.6	100.1	106.3	47.6	69.8	93.4	47.1	85.0	99.9
Excel	45.9	90.6	99.9	47.1	77.2	100.2	46.5	83.9	100.
Foster	46.4	83.3	92.1	--	--	--	--	--	--
Lacey	48.2	92.7	100.4	48.3	72.8	106.9	48.3	82.8	103.6
Legacy	45.1	88.9	98.5	46.4	70.6	95.5	45.8	79.7	97.0
MN Brite	47.1	84.3	96.5	47.0	72.3	92.4	47.1	78.3	94.4
Robust	47.7	78.3	91.7	48.2	69.1	93.0	48.0	73.7	92.4
Stander	45.8	91.5	102.3	--	--	--	--	--	--
Stellar-ND	46.5	102.9	113.2	47.8	70.4	104.7	47.2	86.7	108.9
Tradition	47.1	98.7	107.0	48.8	71.4	100.1	48.0	85.1	103.6
Two-rowed									
AC Metcalfe	45.2	66.8	--	50.2	77.2	--	47.7	68.8	--
Bowman	45.0	62.8	72.5	50.5	79.4	93.6	47.8	71.1	83.1
Conlon	45.8	48.7	73.5	51.3	76.1	99.5	48.6	62.4	86.5
Eslick	47.4	80.2	--	51.4	86.2	--	49.4	83.2	--
Harrington	42.3	59.7	71.8	49.9	76.7	78.5	46.1	68.2	75.2
Haxby	49.4	95.3	--	53.4	83.0	--	51.4	89.2	--
Logan	47.0	78.4	--	50.2	74.1	94.2	48.6	76.3	--
Rawson	44.6	76.1	91.4	47.9	70.1	82.8	46.3	73.1	--
Stark	--	--	--	51.8	81.7	98.0	--	--	--

2005 Fargo barley data not available due to excessive water damage.

Table 3. Plump and protein of barley at two locations in eastern North Dakota, 2005.

Variety	Carrington		Langdon		Average eastern N.D.	
	Plump	Protein	Plump	Protein	Plump	Protein
	%	%	%	%	%	%
Six-rowed						
Drummond	81	11.6	90	10.8	85	11.2
Excel	74	11.3	84	9.8	79	10.6
Foster	86	11.2	--	--	--	--
Lacey	87	11.9	92	10.5	90	11.2
Legacy	78	11.6	92	12.0	85	11.8
MN Brite	83	13.0	92	12.4	87	12.7
Robust	82	12.8	91	11.3	87	12.1
Stander	80	10.8	--	--	--	--
Stellar-ND	87	11.5	94	10.8	91	11.2
Tradition	81	11.4	94	11.0	88	11.2
Two-rowed						
AC Metcalfe	58	12.0	91	10.7	74	11.4
Bowman	55	12.1	92	10.6	74	11.4
Conlon	73	12.0	97	10.5	85	11.3
Eslick	69	11.5	87	8.5	78	10.0
Harrington	45	11.7	89	9.5	67	10.6
Haxby	71	12.0	92	8.8	82	10.4
Logan	64	11.4	91	9.8	77	10.6
Metcalfe	58	12.0	91	10.7	74	11.4
Rawson	83	10.4	98	9.3	91	9.9
Stark	--	--	94	10.4	--	--

Table 4. Yield and test weight of barley at four locations in western North Dakota, 2003-05.

Variety	Minot			Williston			Dickinson			Hettinger			Average western N.D.		
	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr.	Test Wt.	Yield 2005	Yield 3 Yr.
	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A
Six-rowed															
Drummond	47.9	95.8	117.8	50.4	84.5	87.9	44.9	95.4	84.5	43.1	64.5	68.8	46.6	85.1	89.8
Excel	46.9	94.4	117.0	48.8	84.9	89.8	43.0	94.9	87.7	41.5	56.4	64.7	45.1	82.7	89.8
Foster	--	--	--	49.7	79.0	86.5	44.0	93.0	84.8	--	--	--	--	--	--
Lacey	48.4	88.8	112.5	50.4	87.7	92.9	46.9	97.7	85.1	43.6	65.4	67.2	47.3	84.9	89.4
Legacy	47.4	88.4	111.8	48.8	75.8	84.4	43.5	94.8	86.6	41.9	55.4	68.4	45.4	78.6	87.8
MN Brite	--	--	--	50.1	67.8	--	--	--	--	--	--	--	--	--	--
Robust	48.0	86.6	105.0	50.8	80.8	86.2	44.9	93.2	79.9	43.8	52.8	63.4	46.9	78.4	83.6
Stander	--	--	--	49.7	72.0	80.5	--	--	--	--	--	--	--	--	--
Stellar-ND	47.5	103.4	122.4	49.0	79.1	86.5	44.1	101.5	86.1	41.5	60.1	66.6	45.5	86.0	90.4
Tradition	46.6	96.5	119.9	50.6	80.2	86.8	43.7	88.0	85.5	41.3	56.7	65.3	45.6	80.4	89.4
Two-rowed															
AC Metcalfe	47.4	80.7	--	51.1	81.2	--	45.3	85.1	--	43.1	60.6	--	46.7	76.9	--
Bowman	49.7	82.6	114.3	51.9	84.5	88.5	44.1	69.2	76.7	46.6	66.8	71.5	48.1	75.8	87.8
Conlon	49.5	75.8	114.2	52.0	98.9	93.3	48.5	76.0	68.0	46.1	63.9	68.3	49.0	78.7	86.0
Eslick	49.3	105.7	--	52.2	85.6	--	46.7	100.8	--	42.7	63.6	--	47.7	88.9	--
Harrington	43.9	62.2	100.3	49.7	64.6	77.1	41.3	75.4	71.8	41.0	52.6	61.8	44.0	63.7	77.8
Haxby	50.4	98.6	--	53.5	87.7	--	46.3	83.9	--	47.3	76.8	--	49.4	86.8	--
Logan	47.9	86.5	121.5	52.1	80.3	86.3	47.7	83.6	85.5	45.0	66.7	75.2	48.2	79.3	92.1
Rawson	46.7	100.6	119.7	49.7	83.6	89.2	49.2	91.6	86.1	44.2	65.2	73.3	47.4	85.3	92.1
Stark	49.4	98.7	121.0	52.4	82.0	86.8	48.0	91.7	89.5	46.4	67.7	74.3	49.1	85.0	92.9

Table 5. Plump and protein of barley at four locations in western North Dakota, 2005.

Variety	Minot		Williston		Dickinson		Hettinger		Avg. western N.D.	
	Plump %	Protein %	Plump %	Protein %	Plump %	Protein %	Plump %	Protein %	Plump %	Protein %
Six-rowed										
Drummond	81	12.3	86	13.9	76	14.3	62	13.5	76	13.5
Excel	76	12.0	82	13.8	64	13.7	68	13.4	73	13.2
Foster	--	--	91	13.0	80	14.2	--	--	--	--
Lacey	82	12.7	89	13.8	86	14.1	61	13.6	80	13.6
Legacy	83	12.6	87	13.6	66	14.4	58	13.5	74	13.5
MN Brite	--	--	91	16.6	--	--	--	--	--	--
Robust	79	13.1	91	14.0	74	14.3	67	14.1	70	13.9
Stander	--	--	88	13.7	--	--	--	--	--	--
Stellar-ND	84	12.5	93	13.4	82	14.1	71	13.2	83	13.3
Tradition	75	12.0	88	14.2	72	13.3	62	13.9	74	13.4
Two-rowed										
AC Metcalfe	70	12.5	88	14.5	67	14.4	64	15.6	72	14.3
Bowman	77	12.5	93	14.3	68	14.6	88	13.8	82	13.8
Conlon	82	11.6	96	13.3	91	14.0	89	13.8	90	13.2
Eslick	75	11.6	90	14.0	73	14.0	57	14.4	74	13.5
Harrington	29	12.8	79	14.1	46	13.9	42	15.9	49	14.2
Haxby	74	12.1	91	14.1	65	14.1	76	13.8	77	13.5
Logan	69	11.6	90	14.1	73	13.9	73	13.9	76	13.4
Rawson	88	10.4	97	11.8	90	12.9	89	12.3	91	11.9
Stark	74	11.8	93	13.7	80	14.6	81	13.8	82	13.5

Table 6. 2005 North Dakota oat variety descriptions.

Variety	Origin	Year Released	Grain Color	Height	Straw Strength	Maturity ²	Reaction to Diseases				
							Stem Rust	Crown Rust	Barley Y.Dwf ⁴	Bu/Wt	Protein ³
AC Assiniboia	Can. Proven Seed	1997	Red	med	strong	L	S	R	T	good	ML
AC Gwen	Can. SeCan	2000	hulless	tall	strong	L	S	R	R	good	L
AC Kaufman	Can.	2000	yellow	tall	strong	L	S	R	MT	v.good	ML
AC Medallion	Can. Cargill	1997	white	tall	med.	L	S	R	MT	good	ML
AC Morgan	Can. SeCan	1999	white	med.	strong	L	S	S	S	v.good	ML
AC Pinnacle	Can. QAS	1999	white	tall	med.	L	S	R	S	v.good	L
AC Ronald	Can. SeCan	2001	white	m. short	v. strong	L	S	R	T	v.good	M
Beach	NDSU	2004	white	tall	m.strg.	ML	S	MR/MS	MS	v.good	M
Buff	SD	2002	hulless	med.	m.strg.	L	S	MR/MS	MT	good	H
CDC Boyer	Sask. Value Added	1994	white	tall	m.strg.	L	S	MS	S	v.good	ML
CDC Dancer	Can. Cargill	2000	white	tall	strong	L	S	S	S	v.good	M
CDC Orrin	Can. QAS Cargill	2001	white	tall	strong	L	S	S	S	good	ML
CDC Pacer	Sask. Value Added	1996	white	tall	m.strg.	L	S	S	S	good	L
Ebeltoft	ND	1999	white	tall	strong	VL	S	MR/MS	S	v.good	M
Gem	WI	1996	yellow	tall	strong	L	S	R	MT	v.good	M
HiFi	ND	2001	white	tall	strong	L	MR/MS	R	T	good	M
Hyttest	SD	1986	white	tall	m.strg.	E	S	MS	S	v.good	H
Jerry	ND	1994	white	tall	strong	M	S	MS	MT	v.good	M
Jud	ND	1997	ivory	tall	med.	L	R	MR	T	good	MH
Killdeer	ND	2000	white	med.	strong	M	S	MS	MT	good	M
Leonard	MN	2001	yellow	tall	m.strong	L	S	R	T	fair	ML
Loyal	SD	2000	ivory	tall	m.strong	L	S	MR	T	good	MH
Maida	ND	2005	yellow	med.	strong	M	R	R	NA	v.good	MH
Monida	MT/ID	1985	white	m.tall	strong	L	S	S	NA	good	ML
Morton	ND	2001	white	tall	v.strong	L	S	R	MT	v.good	M
Otana	MT	1977	white	m.tall	m.weak	L	S	S	S	v.good	ML
Paul	ND	1994	naked	v.tall	strong	L	R	R/MR	T	good	H
Reeves	SD	2002	white	m.tall	med.	E	S	MR	MT	good	H
Richard	MN	2000	yellow	tall	strong	M	S	MS	T	good	M
Sesqui	MN	2001	yellow	m.tall	strong	L	S	R	T	good	M
Stark	NDSU	2004	naked	tall	m.strg.	L	R	MR/MS	T	v.good	M
Triple Crown	Canterra	1998	white	tall	strong	L	S	S	S	good	L
Vista	WI	2000	yellow	tall	strong	L	S	R	MT	good	M
Wabasha	MN	2001	white	tall	v.strong	M	S	R	T	good	M
Whitestone	ND	1994	white	short	strong	L	S	MS	MT	good	L
Youngs	ND	1999	white	med.	strong	L	S	MS/S	MT	good	M

1 Reaction to NA-67 currently the most prevalent race of stem rust.

2 E = early; M = medium; L = late.

3 H = high; M = medium; L = low; V = very; VL = very low.

4 S = susceptible; MS = moderately susceptible; MT = moderately tolerant; T = tolerant. Varieties rated MT or T have a relatively good degree of protection against barley yellow dwarf virus.

† Resistant to the new race of stem rust that is gaining in importance in the state.

Varieties in bold were released in 2005.

Table 7. Yield and test weight of oat varieties at three locations in eastern North Dakota, 2003-05.

Variety	Fargo			Carrington			Langdon			Average eastern N.D.		
	Test	Yield		Test	Yield		Test	Yield		Test	Yield	
	Wt.	2005	3 Yr	Wt.	2005	3 Yr	Wt.	2005	3 Yr	Wt.	2005	3 Yr
AC Assiniboia	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A
AC Assiniboia	40.9	171	181	34.0	117.1	134.6	19.1	26.3	104.9	31.3	104.8	140.2
AC Furlong	--	--	--	34.8	131.9	--	25.8	46.2	113.0	--	--	--
AC Gwen	42.2	127	146	38.9	80.0	--	36.6	40.0	--	39.2	82.3	--
AC Kaufman	41.7	153	166	35.4	115.9	135.7	27.5	56.6	113.8	34.8	108.5	138.5
AC Pinnacle	39.5	155	169	38.7	110.9	143.9	32.8	108.1	138.3	37.0	124.7	150.4
AC Ronald	41.1	158	179	34.8	110.2	137.1	22.2	24.3	103.7	32.7	97.5	139.9
Beach	43.2	137	171	37.4	112.1	--	34.6	93.9	--	38.4	114.3	--
Buff	45.0	129	145	41.3	84.1	101.2	45.5	71.9	96.0	43.9	95.0	114.1
CDC Dancer	41.1	126	164	37.3	112.1	--	38.7	110.9	--	39.0	116.3	--
CDC Weaver	39.7	160	--	35.3	110.1	--	27.5	56.5	--	34.2	108.8	--
Ebeltoft	36.7	144	171	35.7	128.9	151.5	32.8	97.6	136.1	35.1	123.5	152.9
HiFi	40.5	179	185	36.4	123.5	139.7	39.2	168.2	154.6	38.7	156.9	159.8
Hystest	42.5	123	141	39.2	85.8	100.0	37.3	75.8	108.0	39.7	94.9	116.3
Jerry	42.0	128	149	37.5	94.2	117.9	29.6	53.4	107.0	36.4	91.9	124.6
Killdeer	38.8	179	192	36.0	128.7	149.0	29.9	87.2	136.4	34.9	131.6	159.1
Leonard	38.8	170	186	33.6	126.9	--	34.6	107.9	--	35.7	134.9	--
Maida	41.2	152	--	40.4	141.6	--	30.9	64.5	--	37.5	119.4	--
Morton	41.2	131	163	37.6	117.1	132.2	39.5	135.5	140.7	39.4	127.9	145.3
Otana	37.4	78	136	31.2	96.9	119.1	25.0	38.9	89.5	31.2	71.3	114.9
Paul	48.3	110	137	39.1	93.6	110.5	44.0	71.7	96.6	43.8	91.8	114.7
Sesqui	37.9	121	153	36.4	119.2	134.7	37.3	107.8	133.1	37.2	116	140.3
Stark	42.5	151	164	40.5	88.6	112.8	43.3	95.5	--	42.1	111.7	--
Triple Crown	--	--	--	33.7	111.2	141.6	--	--	--	--	--	--
Youngs	36.4	150	172	35.0	120.5	127.0	32.8	93.6	124.5	34.7	121.4	141.2

Table 8. Yield and test weight of oat varieties at four locations in western North Dakota, 2003-05.

Variety	Minot			Williston			Dickinson			Hettinger			Average		
	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr.	Test Wt.	Yield 2005	Yield 3 Yr.	Test Wt.	Yield 2005	Yield 3 Yr.
AC Assiniboia	33.5	123.1	155.9	32.6	95.3	95.9	30.9	130.1	86.6	31.1	83.1	75.3	32.0	107.9	103.4
AC Furlong	--	--	--	34.4	115.0	--	--	--	--	--	--	--	--	--	--
AC Gwen	40.4	98.4	117.1	37.7	84.6	61.5	35.5	93.3	--	30.5	46.2	--	36.0	80.6	--
AC Kaufman	34.1	133.3	163.6	37.1	108.4	110.0	31.8	103.8	85.9	29.6	77.9	74.2	33.2	105.9	108.4
AC Medallion	--	--	--	35.1	117.0	115.2	--	--	--	--	--	--	--	--	--
AC Morgan	--	--	--	34.5	115.7	121.9	--	--	--	--	--	--	--	--	--
AC Pinnacle	34.3	179.6	195.1	35.9	115.2	118.9	32.4	135.8	106.9	27.6	81.0	77.9	32.6	127.9	124.7
AC Ronald	34.6	97.0	152.9	38.1	120.2	121.2	34.6	124.2	97.5	32.1	87.2	73.1	34.9	107.2	111.2
Beach	36.7	140.8	175.2	38.2	120.4	113.2	34.2	121.9	96.1	33.4	87.5	78.0	35.7	117.7	115.6
Buff (HL)	47.2	109.7	--	45.0	84.6	82.2	42.0	80.1	73.6	39.9	78.5	61.5	43.5	88.2	--
CDC Boyer	35.6	121.5	164.0	36.5	114.0	113.3	--	--	--	--	--	--	--	--	--
CDC Dancer	39.2	128.4	--	38.1	114.3	118.9	32.6	121.8	--	30.4	74.2	--	35.1	109.7	--
CDC Orrin	--	--	--	35.0	126.2	121.0	--	--	--	--	--	--	--	--	--
CDC Pacer	30.1	102.6	158.1	35.5	119.8	119.0	33.1	119.2	99.6	27.7	85.3	80.0	31.6	106.7	114.2
CDC Weaver	34.8	128.1	--	36.6	119.9	--	--	--	--	--	--	--	--	--	--
Ebeltoft	34.8	143.5	174.1	35.7	123.0	110.6	32.9	132.1	98.2	27.5	82.8	73.7	32.7	120.4	114.2
HiFi	36.5	184.4	181.0	36.4	119.4	114.3	31.5	114.5	95.2	31.4	98.1	79.4	34.0	129.1	117.5
Hytest	36.9	103.5	140.3	41.3	87.2	86.6	36.7	101.2	91.9	35.9	91.2	75.1	37.7	95.8	98.5
Jerry	33.5	95.9	146.7	38.9	96.2	95.2	33.3	115.2	95.1	33.4	84.9	76.3	34.8	98.1	103.3
Killdeer	34.0	126.7	175.9	35.6	117.0	120.6	33.2	137.9	107.5	30.2	89.3	82.0	33.3	117.7	121.5
Leonard	36.4	157.8	--	35.3	120.2	--	29.7	124.6	--	--	--	--	--	--	--
Maida	37.6	152.7	--	37.0	105.4	--	32.3	118.0	--	31.3	77.7	--	34.6	113.4	--
Monida	25.1	71.5	151.2	33.3	112.6	119.0	29.6	131.8	105.1	24.2	79.9	78.5	28.1	98.9	113.5
Morton	35.4	170.1	179.9	37.2	111.6	104.8	32.5	121.7	95.4	29.2	76.0	73.4	33.6	119.9	113.4
Otana	26.0	63.9	138.2	36.7	104.0	115.2	33.7	124.3	105.8	28.2	82.3	76.5	31.2	93.6	108.9
Paul	40.5	81.7	107.0	43.1	75.4	81.4	41.3	82.9	66.1	35.1	44.8	45.0	40.0	71.2	74.9
Reeves	--	--	--	39.3	83.1	79.4	--	--	--	--	--	--	--	--	--
Sesqui	37.1	135.8	169.1	37.4	104.2	119.5	33.6	121.5	103.6	31.4	87.7	83.2	34.9	112.3	118.9
Stark	42.0	114.1	123.8	38.5	83.5	86.3	36.7	89.0	79.9	33.4	59.2	52.6	37.7	86.5	85.7
Triple Crown	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weaver	--	--	--	--	--	--	30.6	107.5	--	28.9	87.1	--	--	--	--
Youngs	35.9	131.4	166.2	35.2	108.2	113.0	31.2	114.3	95.5	27.6	82.7	77.1	32.5	109.2	112.9

Table 9. 2005 North Dakota winter rye variety descriptions.

Variety	Origin	Year Released	Height	Straw Strength	Maturity	Seed Color	Seed Size	Test Weight	Winter Hardiness
AC Rifle	Can	1994	short	v.good	med.	blue	med.	med.	v.good
AC Remington	Can	1998	short	v.good	med.	--	med.	good	good
Dacold	ND	1989	med.	good ¹	v.late	bl-grn.	med.	low	good
Prima	Can.	1984	tall	good	med.	blue	large	med.	v.good
Frederick	SD	1984	tall	fair	late	tan	med.	high	good
Musketeer	Can.	1980	tall	good	m.early	blue	large	med.	v.good
Rymin	MN	1973	tall	v.good	late	grn-gray	large	high	fair ²
Spooner	WI	1993	tall	v.good	med.	tan	--	high	--
Hancock	WI	1979	tall	good	med.	tan	--	high	--

¹ Under certain environments, lodging has been observed.

² Varieties with fair winter hardiness should not be seeded on bare soil.

Table 10. Yield and test weight of winter rye varieties at three locations in North Dakota, 2003-05.

Variety	Carrington			Minot			Williston			State Average		
	Test	Yield		Test	Yield		Test	Yield		Test	Yield	
	Wt.	2005	3 Yr	Wt.	2005	3 Yr	Wt.	2005	3 Yr	Wt.	2005	3 Yr
	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A
AC Remington	--	--	--	51.4	87.9	--	--	--	--	--	--	--
AC Rifle	51.3	42.4	69.0	49.3	61.3	70.9	54.7	46.2	67.4	51.8	50.0	69.1
Dacold	51.8	61.9	81.7	49.3	81.0	86.2	54.4	51.2	72.6	51.8	65.8	80.2
Hancock	--	--	--	53.7	88.3	--	--	--	--	--	--	--
Musketeer	55.3	71.9	86.7	52.7	86.2	90.3	--	--	--	--	--	--
Prima	54.2	69.8	82.7	52.5	83.5	--	--	--	--	--	--	----
Spooner	--	--	--	52.5	78.9	--	--	--	--	--	--	--
Wheeler	--	--	--	50.9	42.2	--	--	--	--	--	--	--

Table 11. 2005 North Dakota flax variety descriptions.

Variety ¹	Origin	Year Released	Relative Maturity ²	Seed Color	Plant Height	Wilt	Relative Yield
NorLin	Can.	1982	early	brown	med.	MS	good
AC-Watson	Can.	1996	early	brown	short	MR	v.good
CDC-Valour	Can.	1996	early	brown	short	MR	v.good
Linton	ND	1985	early	brown	med.	R	v.good
Prompt	SD	1988	early	brown	med.	MR	good
Hanley	Can.	2002	mid/early	brown	med.	R	v.good
AC-Emerson	Can.	1994	mid.	brown	med.	VR	v.good
CDC-Normandy	Can.	1995	mid.	brown	short	MR	v.good
Cathay	ND	1998	mid.	brown	med.	MR	v.good
Pembina	ND	1998	mid.	brown	med.	MR	v.good
Carter	ND	2004	mid.	yellow	med.	R	v.good
Nече	ND	1988	mid.	brown	med.	R	good
Omega	ND	1989	mid.	yellow	med.	MS	v.good
Rahab 94	SD	1994	mid.	brown	med.	MR	good
CDC Arras	Can.	1999	mid.	brown	med.	MR	v.good
CDC Bethume	Can.	1999	mid/late	brown	med.tall	MR	v.good
AC Carnduff	Can.	1998	mid/late	brown	med.tall	MR	v.good
CDC Mons	Can.	2003	mid/late	brown	med.	MR	v.good
Taurus	Can.	2003	mid/late	brown	med.	MR	v.good
Flanders	Can.	1989	late	brown	med.	MS	good
Webster	SD	1998	late	brown	tall	MR	v.good
McDuff	Can.	1993	late	brown	med.tall	MR	v.good
AC Linora	Can.	1993	late	brown	tall	R	v.good
Selby	SD	2000	late	brown	tall	MR	good
York	ND	2002	late	brown	med.	R	v.good
Nekoma	ND	2002	late	brown	med.	MR	v.good
AC Lightning	Can.	2002	late	brown	med.tall	R	v.good

¹ All varieties have resistance to prevalent races of rust; all have good oil yield and oil quality.

² Varieties listed order of maturity.

Table 12. Yield and test weight of flax varieties at two locations in eastern North Dakota, 2003-05.

Variety	Langdon			Carrington			Average eastern N.D.		
	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr	Test Wt.	Yield 2005	Yield 3 Yr
	lb/bu	bu/A	bu/A	bu/A	bu/A	bu/A	lb/bu	bu/A	bu/A
AC Lightning	52.1	34.0	27.5	53.7	23.6	--	52.9	28.8	--
AC Nuggett	--	--	--	53.9	24.5	34.9	--	--	--
AC Watson	53.0	35.9	30.3	54.0	26.1	32.3	53.5	31.0	31.3
Bison	53.1	34.6	24.4	--	--	--	--	--	--
Carter*	53.2	39.0	30.8	54.9	27.3	36.1	54.1	33.2	33.4
Cathay	53.6	41.8	30.3	54.3	21.6	31.6	54.0	31.7	31.0
CDC Arras	52.6	44.3	30.1	54.4	26.4	35.1	53.5	35.4	32.6
CDC Bethume	53.3	39.9	33.6	54.3	29.8	37.0	53.8	34.9	35.3
Hanley	53.9	41.4	33.8	--	--	--	--	--	--
Linott	53.5	40.1	29.0	--	--	--	--	--	--
McGregor	53.8	44.6	31.6	--	--	--	--	--	--
Neché	53.5	40.3	30.0	54.7	25.6	32.5	54.1	33.0	31.25
Nekoma	53.8	36.3	28.9	55.1	27.9	32.2	54.5	32.1	30.6
Omega*	53.2	35.9	26.1	54.9	27.7	33.2	54.1	31.8	29.7
Pembina	53.4	38.5	30.6	54.7	23.9	32.8	54.1	35.7	31.7
Prairie Blue	53.2	43.2	35.4	54.1	26.3	--	53.6	34.8	--
Rahab 94	53.4	39.2	33.0	54.5	29.6	34.4	54.0	34.4	33.7
Selby	54.1	43.5	30.3	54.7	21.8	31.8	54.4	32.7	31.1
Taurus	--	--	--	54.4	27.5	--	--	--	--
Webster	53.9	44.1	31.1	54.5	29.6	36.4	54.2	36.9	33.8
York	54.4	43.5	32.4	54.8	26.7	35.5	54.6	35.1	34.0

*Yellow seeded

Table 13. Yield and test weight of flax varieties at two locations in western North Dakota, 2003-05.

Variety	Williston			Minot			Average western N.D.		
	Test	Yield		Test	Yield		Test	Yield	
	Wt.	2005	3 Yr	Wt.	2005	3 Yr	Wt.	2005	3 Yr
	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A	lb/bu	bu/A	bu/A
AC Lightning	--	--	--	51.1	35.9	27.1	--	--	--
AC Watson	53.5	20.8	18.5	52.1	36.3	29.5	52.8	28.6	24.0
Bison	53.4	20.0	18.5	52.8	37.7	30.7	53.1	28.9	24.6
Carter*	53.9	21.1	18.5	52.2	41.9	31.1	53.1	31.5	24.8
Cathay	53.3	22.0	18.4	52.3	41.5	30.8	52.8	31.8	24.6
CDC Arras	53.1	21.6	19.6	51.5	40.1	32.1	52.3	30.9	25.9
CDC Bethume	53.3	21.9	19.0	52.0	41.4	32.3	52.7	31.7	25.7
Hanley	53.3	19.6	17.1	53.2	43.3	31.2	53.3	31.4	24.2
Linott	53.3	20.6	18.2	52.8	42.6	30.9	53.1	31.6	24.6
McGregor	53.8	20.2	17.6	52.7	43.7	32.7	53.3	31.9	25.2
Neché	53.7	20.7	19.2	52.5	43.0	32.9	53.1	31.8	26.1
Nekoma	54.0	21.2	18.1	52.6	41.9	33.1	53.3	31.6	25.6
Omega*	53.6	20.6	17.9	51.8	33.5	28.5	52.7	27.1	23.2
Pembina	53.2	19.6	17.0	52.4	42.8	29.5	52.8	31.2	23.3
Prairie Blue	53.3	23.8	--	52.5	48.2	--	52.9	36.0	--
Rahab 94	53.5	20.5	18.2	53.2	41.6	28.4	53.3	31.1	23.3
Taurus	53.6	20.5	--	52.8	38.8	--	53.2	29.7	--
Webster	53.6	23.3	19.1	52.3	45.0	33.0	52.9	34.2	26.1
York	54.4	19.9	18.0	53.3	46.4	33.2	53.8	33.2	25.6

*Yellow seeded

For more information on this and other topics, see: www.ag.ndsu.edu