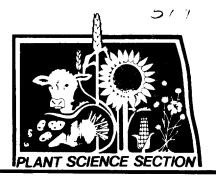


Cooperative Extension Service

NORTH DAKOTA STATE UNIVERSITY FARGO, NORTH DAKOTA 58105

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING



DECEMBER 1984

NORTH DAKOTA

STATE UNIVERSITY

CIRCULAR A-170 (Revised)

NORTH DAKOTA

STATE DEPOSITORY

DOCUMENT



North Dakota

GRAIN VARIETY
DESCRIPTIONS

WILLIAM S. BALL
Extension Agronomist
and Experiment Station Staff

Circular A-170 contains descriptions of varieties that may be or have been sold for seed in North Dakota. These descriptions cover popular and non-popular varieties and are intended to help the farm operator obtain a general description of the variety. Current yield data and variety recommendations by district are published in the North Dakota Variety Performance Report available from County Extension offices throughout the state.

Factors that are important in selecting a variety include: yield, maturity, disease resistance, quality, straw strength, shatter resistance, height and many others. In most instances, relative yield may be the most important factor but susceptibility to a disease that may only strike one year out of five may offset any yield advantage. Premiums paid for quality or benefits obtained in feeding higher quality will often offset yield advantages. Important quality factors include protein and milling and baking characteristics of wheat; the gluten strength, test weight and seed size of durum; malting approval, kernel plumpness, protein and test weight in barley; and groat protein and test weight in oats. If lower quality varieties of a

particular crop are grown, the demand for that crop from that region may be reduced, resulting in lower prices.

The importance of characteristics such as straw strength and plant height may vary from field to field and year to year. Straw strength may not be as important on recrop fields with low soil moisture reserves but is very important for the prevention of lodging on fields with good moisture and high fertility. Tall varieties are more competitive with weeds than semidwarf varieties and they often have yield advantages in fields where good weed control has not been obtained.

Statements about rusts and other diseases in this circular are based on variety reaction to known races to which the variety has been tested. New races of rust and other diseases may develop to which the varieties are not resistant. Rust, leaf diseases, and pasmo of flax occur most frequently in eastern North Dakota. Varieties should be chosen for characteristics most able to withstand crop hazards that have occurred frequently in your area.

HRS WHEAT

Variety Descriptions

								tion to		Quali	ty Factors	•
Variety	Origin¹	Year released	Beards	Height	Strength of straw	Maturity	Stem	Leaf rust²	Test wt.	Pro- tein	Quality rating ³	Comments
Len	ND	1979	ves	s.dwf.	v.strg.	m.early	R	R	high	avg.	4	
Waldron	ND	1969	no	med.	strg.	m.early		MS	avg.	high	4	Ergot susceptible
Leader	Canada	1982	no	med.	m.strg.	med.	R	MS	high	high	4	Res. sawfly
Tioga	ND	1974	no	med.	m.strg.	med.	S	S	avg.	high	4	Sawfly & bl. chaff resistant
Coteau	ND	1978	yes	med.	m.strg.	med.	Ř	Ř	avg.	high	4	Some res. to tan spot*
W.S. 1809	ws	1970	no	s.dwf.	strg.	early	R*	R	avg.	low	3	
Olaf	ND	1973	yes	s.dwf.	strg.	m.early	R	MR	avg.	avg.	3	Susceptible to shatter
Stoa	ND	1984	yes	med.	m.strg.	m.early		R	high	avg.	3	
2348	Pion	1984	yes	med.	m.strg.	late	R	MS	avg.	avg.	3	
Columbus	Canada	1981	no	med.	m.strg.	med.	R۴	MS	high	high	3	Preharvest seed dormancy
Lew	Montana	1976	no	med.	med.	med.	R۴	MR	high	avg.	3	Resistant to sawfly
Butte	ND	1977	yes	med.	med.	early	R'	MS	high	avg.	3	False bl. chaff
James	SD	1978	yes	med.	m.strg.	early	R	MR	avg.	avg.	3	
Pondera	Montana	1980	yes	s.dwf.	strg.	m.early	R'	MS	avg.	avg.	3	
Alex	ND	1981	no	med.	med.	med.	R¹	R	high	avg.	3	÷
Era	MN	1970	yes	s.dwf.	strg.	late	R ⁶	MR	high	low	. 2	
West B 906R	W.P.B.	1979	yes	s.dwf.	strg.	m.early	R'	MR	avg.	avg.	2	
Norak	R.H.	1984	yes	s.dwf.	strg.	med.	R	R	high	low	2	
Guard	SD	1983	yes	s.dwf.	strg.	m.early	R	R	high	low	2	Res. to Hessian fly
Oslo	NAPB	1981	yes	s.dwf.	v.strg.	early	R'	MS	avg.	low	2	ries. to riessian ny
	AGS	1980	•	s.dwf.	strg.	med.	R ^s	R	avg.	low	2	
Walera	_		yes		•	early	R'	R	high	low	2	
Challenger	W.P.B.	1983	yes	s.dwf.	strg.	•	R¹	MS	high	avg.	2	
Victory 283	P.R.S.D.	1983	yes	med.	strg.	m.early	R ^c	R R	high	low	2	Some res. to tan spot*
Solar	AGS	1978	yes	s.dwf.	strg.	late	R°	R	avg.	low	2	Low test weight
Wheaton	MN	1983	yes	s.dwf.	strg.	m.early	R ^s	R¹	high	low	2	
Marshall	MN	1982	yes	s.dwf.	v.strg.	med.	R'	MR	high	low	2	
2369	Pion	1982	yes	s.dwf.	strg.	m.early		MS	high	low	2	
Centa	SD	1982	yes	med.	med.	early late	R R'	MIS R	avg.	low	2	Some susc: to shatter
Erik	NAPB	1982	yes	s.dwf.	v.strg.	early	R ¹	R	N/A	N/A	N/A	Como caso: to onatto
Apex	S.T.	1983	yes	s.dwf.	strg. med.	m.early	R°	MR	N/A	N/A	N/A	
Katepwa	Canada	1984	no	med.		m.earry late	R° R	мн R	N/A	N/A	N/A	
Success	Cenex	1984	yes	s.dwf. s.dwf.	m,strg.		n R	MR	N/A	N/A	N/A	
Buckshot	ARHD	1984	yes		strg.	med. late	R;	MR	N/A	N/A	N/A	
WMaster 99	W.M.	1004	no	med.	m.strg.		R.	M C R	N/A	N/A	N/A	
Leif	R.H.	1984	yes	s.dwf.	m.strg.	m.early	rt R⁴	MS			1	Res. sawfly
Glenman	Montana	1984	no	s.dwf.	strg.	med. med.	R'	MS R	avg.	low	1	Utility wheat, res. tan spot*
Glenlea	Canada	1971	no	med.	m.strg.	mea.	Π.	n	avg.	low	1	Othing wheat, les. tall spot

^{&#}x27;P.R. refers to individual developer; W.S.-World Seeds, R.H.-Rohm Haas, NK-Northrup King, NAPB-North American Plant Breeders, AGS-Agsco; W.P.B.-Western Plant Breeders, Pion-Pioneer Hi-Bred Int., W.M.-Weathermaster, S.T.-Seedtec, ARHD-Arrowhead.

N/A = Quality data not available.

HARD RED WINTER WHEAT

Variety Descriptions

Variety	Origin	Year	Quality	Leaf rust	Stem rust	Maturity	Straw strength	Height	Winter hardiness
Roughrider	ND	1974	4	s	R	med.	m.strg.	med.	good
Agassiz	ND	1983	4	s	R	med.	m.strg.	med.	good
Norstar	Canada	1977	3	s	s	late	med.	tall	good
Winoka	SD	1969	2	s	R	med.	med.	med.	fair
Rose	SD	1981	3	MS	MS	early	v.strg.	short	poor
Rita	SD	1980	3	MS	MR	early	strg.	short	poor
Winridge	Montana		N/A	S	s	med.	strg.	med.	poor
Norwin	Montana	1983	1	s	MR	med.	strg.	v.short	fair
Colt	NE	1983	N/A	MR	R	early	strg.	v.short	poor
Siouxland	NE	1984		R	R	early	strg.	med.	poor

³R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible; ⁴ = occasionally mixed with some susceptible plant, ⁵ = MR, ⁶ = S or MS in artificial induced epidemics.

^{31.} Very poor quality; 2. Poor quality; 3. Average quality; 4. Good quality. Quality assessed by North Dakota State University Cereal Quality Laboratory.

^{*} During prolonged wet periods no varieties are resistant to tan spot.

DURUM

Variety Descriptions

				Height				ion to	Norn	nal crop ²		
Variety	Origin	Year released	Chaff color		Straw strength	Maturity	Stem rust'	Leaf rust	Test wt.	Kernel size	Overall ² quality	Remarks ³
Wells	ND	1960	tan	med.	weak	m.early	R	R	avg.	small	3	
Rolette	ND	1971	tan	med.	v.strg.	early	R	MR	high	large	3	
Ward	ND	1972	tan	med.	v.strg.	m.early	R	R	avg.	med.	3	
Crosby	ND	1973	tan	med.	m.strg.	m.early	R	R	avg.	med.	3	
Botno	ND	1973	tan	med.	v.strg.	early	R	MR	avg.	med.	3	
Rugby	ND	1973	tan	med.	v.strg.	m.early	R	R	avg.	med.	3	
Macoun	Canada	1973	white	med.	strg.	m.early	MR	MR	avg.	large	3	Strong gluten
Cando	ND	1975	tan	s.dwf.	v.strg.	m.early	R	MR	avg.	small	3	Shatter resistant
Calvin	ND	1978	tan	s.dwf.	v.strg.	m.early	R	MR	avg.	med.	3	Weak seedlings
Arcola	Canada	1984	white	med.	weak	med.	R	MR	avg.	large	4	Strg. gluten, drought tol.
Coulter	Canada	1977	white	med.	m.strg.	m.early	R	MR	avg.	large	4	Strong gluten
Medora	Canada	1983	white	med.	strg.	m.early	R	R	high	large	4	Strong gluten
Vic	ND	1979	white	med.	strg.	m.early	R	R	high	large	4	Strg. gluten, tol. to root rot
Lloyd	ND	1983	white	s.dwf.	v.strg.	m.early	R	MR	avg.	med.	4	Strg. gluten, tol. to root rot

^{&#}x27;R = resistant; MR = moderately resistant; MS = moderately susceptible.

OAT

Variety Descriptions

Varieties listed in order of maturity	Origin	Year released	Color grain	Height	Straw Strength	Maturity ²	Resistance to stem rust races'	Crown rust	Rel. yield	Bu. Wt.	Protein ³
Kelly	SD	1984	white	m.tall	strg.	E	s	MR	good	v.good	МН
Lancer	SD	1979	tan	short	strg.	Ē	Š	MS	good	good	H
Preston	MN	1982	tan	short	strg.	Ē	Š	MR	good	good	н
Noble	IN	1973	vellow	short	v.strg.	Ē	Š	S	good	good	M
Ogle	iL	1981	vellow	short	strg.	M	Š	s	good	fair	L
Kota	SD	1969	yellow	m.tall	m.strg.	M	s	MS	v.good	v.good	M
Lyon	MN	1976	white	m.tall	m.strg.	M	Š	MR	good	good	M
Steele	ND	1984	white	tall	strg.	M	Ř	VR	v.good	good	M
Benson	MN	1979	white	med.	m.strg.	M	Š	MR	good	good	M
Kelsev	Canada	1967	white	m.tall	m.strg.	1	S	MR	v.good	good	٧L
,	NY	1966	vellow	short		_	S	MS	v.good	fair	VL
Cayuse Moore	MN	1979	white	tall	strg. strg.	L	S	MR	v.good	good	М
Rodney	Canada	1953	white	tali	m.strg.	Ŀ	S	MS	good	good	L
Harmon	Canada	1965	white	tall	m.strg.	L	S	S	good	good	L
Otana	Montana	1977	white	m.tall	m.weak	ī	Š	Š	v.good	v.good	ML
Centennial	WI	1983	yellow	m.tall	strg.	ī	Š	Ř	good	v.good	MH
Marathon	wi	1979	tan	med.	strg.	ī	š	R	good	good	H
Dal	Wi	1972	tan	med.	good	ī	š	MR	fair	good	H
Menominee	MI	1977	white	med.	m.strg.	ī	Š	S	v.good	good	M
Dumont	Canada	1982	white	m.tall	m.weak	ī	Ř	٧Ř	v.good	good	ML
Border	WY	1982	white	short	strg.	Ē	S	s	good	fair	1
Pierce	ND	1983	tan	m,tall	m.strg.	Ĩ.	Š	Ř	good	v.good	н
Porter	IN	1982	tan	med.	strg.	Ĺ	Š	MR	v.good	v.good	М
Fidler	Canada	1980	white	med.	strg.	_ L	Ř	R	good	fair	Ľ
Hudson	Canada	1974	white	med.	strg.	Ē	MR	MR	v.good	fair	Ē
Terra	Canada	1977	naked	med.	m.strg.	Ĺ	S	S	good	v.good	Ē

 $^{^{1}}$ Stem rust races most prevalent now. S = susceptible, M = moderately, R = resistant.

²1. Very poor quality; 2. Poor quality; 3. Average quality; 4. Good quality. Quality assessed by North Dakota State University Cereal Quality Laboratory.

³In prolonged wet periods, all durums become susceptible to tan spot. Wells, Rugby, Crosby, Ward and Vic are varieties that show some resistance.

 $^{{}^{2}}E = early$, M = medium, L = late.

 $^{^{3}}H = high, M = medium, L = low, V = very.$

BARLEY

Variety Descriptions

										Reaction to	O²	_
Variety	Origin	Year released	Awn type¹	Aleurone Color	Height	Straw Strength	Rel. maturity	Rel. yield	Stem rust	Loose smut	Leaf diseases	Quality ³
6-Rowed					•							
Larker	ND	1961	S	med.	med.	med.	m.early	fair	R	s	S	M or F
Morex	MN	1978	S	white	med.	m.strg.	m.early	good	R	s	MS	M or F
Glenn	ND	1978	R	white	med.	strg.	early	good	R	S	MS	M or F
Azure	ND	1982	S	blue	med.	strg.	m.early	v.good	R	Ş	MS	M or F
Robust	MN	1983	S	white	med.	v.strg.	med.	v.good	R	S	MS	M or F
Hazen	ND	1984	S	white	med.	v.strg.	med.	v.good	R	S	MS	F1
Bumper	NAPB	1980	Ř	white	med.	strg.	med.	good	R	S S	MS	F
Bedford	Canada	1979	S	white	med.	m.strg.	med.	v.good	R	3	MS	Г,
2-Rowed												
Clark	Montana	1981	R	white	m.short	m.weak	m.late	good	R	S	MS	F
Hector	Canada	1973	R	white	med.	weak	m.late	v.good	R	S	S	F
Summit	NAPB	1976	R	white	m.short	strg.	late	good	S	s	s	F
Norbert	Canada	1980	R	white	med.	strg.	late	good	R	S	MS	F
Harrington	Canada	1981	R	white	m.short	med.	m.late	good	MS	s	MS	F
Elrose	Canada	1979	R	white	m.short	m.weak	m.late	fair	S	s	s	F
Bowman	ND	1984	s	white	m.short	strg.	m.early	v.good	R	s	MS	F
Abee	Canada	1982	R	white	m.short	m.weak	late	good	S	s	s	F

^{&#}x27;Rough or smooth awned.

FLAX

Variety Descriptions

Variety		Year	Relative	Color		Seed	Plant	Resistance to disease		Relative yield	Oil	Oil
	Origin	released	maturity	flower	seed	size	height	Wilt	Rust	ability	yield	quality
McGregor	Canada	1980	late	bl.	br.	med.	tall	R	R	v.good	good	good
Culbert	MN	1975	early	Ы.	br.	small	med.	MR	R	good	good	good
Dufferin	Canada	1975	late	bl.	br.	med.	tall	R	R	v.good	good	good
Wishek	ND	1979	early	bl.	br.	med.	med.	MŞ	R	good	good	good
Culbert 79	SD	1979	early	bl.	br.	med.	med.	MR	R	good	good	good
Flor	ND	1981	early	bl.	br.	med.	med.	MS	R	v.good	good	good
Foster	ND	1969	late	bl.	yel.	smali	short	MR	R	fair	v.good	good
Norlin	Canada	1982	early	bl.	br.	med.	med.	MS	R	v.good	good	good
Clark	SD	1983	early	bl.	br.	med.	med.	MR	R	v.good	good	good

RYE

Variety Descriptions

Variety	Origin	Year released	Height	Straw strength	Maturity	Seed color	Seed size	Test wt.	Winter hardiness
Frontier	Canada	1965	tall	fair	m.early	blue-green	small	high	v.good
Cougar	Canada	1967	med.	good	late	green-tan	small	med.	good
Puma	Canada	1972	med.	good	med.	green	small	med.	v.good
Rymin	MN	1973	med.	v.good	late	green-gray	large	high	fair
Musketeer	Canada	1980	med.	good	m.early	blue	large	med.	v.good

Cooperative Extension Service, North Dakota State University of Agriculture and Applied Science, and U. S. Department of Agriculture cooperating. Myron D. Johnsrud, Director, Fargo, North Dakota. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. We offer our programs and facilities to all persons regardless of race, color, sex, religion, age, national origin, or handicap; and are an equal opportunity employer.

²R = resistant; S = susceptible; MS = moderately susceptible; MR = moderately resistant.

³M = malting; F = feed.

^{*}Not yet classified for malting acceptability.