

# CROP VARIETY RECOMMENDATIONS and CHARACTERISTICS for North Dakota - 1963

THE RELATIVE PERFORMANCE of crop varieties in any year is influenced by the season's growing conditions. Growing seasons vary in temperature and rainfall as well as in the prevalence of rust and other diseases. Crop varieties vary in yield, resistance to high temperatures and drouth, resistance to diseases and in other characteristics.

Early maturity is an advantage some years but a disadvantage in others. In general, the later maturing varieties do best in the northern part of the state where ripening temperatures usually are more moderate.

Rust on all crops and pasmo on flax are expected most often in eastern North Dakota where rainfall and humidity generally are higher. Leaf and head blights, and root rots, are more prevalent in southeastern North Dakota, while smut can be statewide.

Statements made on rust and other diseases in this circular are based on variety reaction to races known to be present and to which the variety has been tested. Each crop year brings the possibility of new disease outbreaks to which present varieties may not be resistant.

No one can predict with accuracy the kind of growing season to expect next year. Therefore, choose varieties with characteristics best able to meet the crop hazards most likely to occur in your area.

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## HARD RED SPRING WHEAT - VARIETY DESCRIPTIONS

Variety	Origin	When re- leased	Beards	Height	Strength of Straw	Maturity	Resistance to:				Rel. Yld. <sup>3/</sup>	Remarks
							Stem rust <sup>1/</sup>	Leaf rust <sup>2/</sup>	Loose smut	Bunt		
Mida	N.Dak.	1944	yes	tall	strong	med.early	poor	poor	poor	good	good	Lacks resistance to 15B
Thatcher	Minn.	1934	no	short	strong	med.early	poor	v.poor	good	poor	good	Lacks resistance to 15B
Rushmore	S.Dak.	1949	no	short	strong	med.early	poor	poor	good	good	fair	Lacks resistance to 15B
Rescue	Canada	1945	no	short	weak	med.early	poor	poor	mod.	poor	low	Saw Fly resistant
Chinook	Canada	1952	no	med.	weak	med.early	poor	poor	poor	poor	low	Saw Fly resistant
Lee	Minn.-N.D.	1951	yes	med.	med.	med.early	fair	good	poor	fair	good	Some tolerance to 15B
Selkirk	Canada	1954	no	med.	med.	med.early	good	good	good	good	good	Not immune from rust
Conley	N.Dak.	1955	yes	m.tall	med.	med.late	good	mod.	good	good	fair	Suscept. to "black chaff". Late.
Canthatch	Canada	1960	no	med.	med.	med.early	good	poor	mod.	good	good	Very susceptible to leaf rust
Pembina	Canada	1960	no	med.	med.	med.early	good	good	good	good	good	Flour quality above Selkirk
Justin	N.Dak.	1962	no	med.	strong	med.	v.good	good	mod.	fair	good	Later in maturity

<sup>1/</sup> Refers to races prevalent since 1950, mainly 15B.

<sup>2/</sup> Many varieties once regarded as resistant are lacking in resistance to races now prevalent in this area.

<sup>3/</sup> Applied to North Dakota in nonrust years.

**Recommendations for 1963 Sowing:** - All named and recommended varieties are high in quality and, therefore, are inherently high in sedimentation value. Seasonal growing conditions will affect sedimentation value more than variety differences.

**FOR RUST AREAS** - Selkirk, Pembina, Justin, Lee and Conley should have preference. Conley has a strong flour, and more stem rust resistance than Selkirk and Pembina but has less leaf rust resistance. Lee has some tolerance to 15B stem rust and its earliness helps it ripen ahead of serious rust injury, high ripening temperatures or late summer drouth. Pembina should go into the same area as Selkirk. Justin is available for seed increase only in 1963.

**FOR WESTERN AREAS, WHERE RUST IS LESS COMMON** - Canthatch, Lee, Justin and Conley should have preference. Even in western areas where the rust hazard usually is less it is advisable to grow more resistant varieties as a protection against years of rust epidemics. Canthatch is resistant to stem rust but susceptible to leaf rust. Mida and Thatcher yield well in rust free years.

**FOR SAWFLY AREAS** - Rescue and Chinook offer some sawfly resistance. They are not resistant to 15B stem rust or to leaf rust. Their yield is somewhat less than other varieties, unless loss from sawfly is severe. Chinook is superior to Rescue only in flour quality.

**NOT RECOMMENDED** - Numbered varieties, or seed sold without a variety name.

## DURUM<sup>3/</sup> VARIETY DESCRIPTIONS

Variety	Origin	When re- leased	Beards	Height	Strength of Straw	Maturity	Resistance to:				Rel. Yld. <sup>4/</sup>	Remarks
							Stem rust <sup>1/</sup>	Leaf rust <sup>2/</sup>	Loose smut	Bunt		
Mindum	Minn.	1917	yes	tall	weak	late	poor	good	good	good	good	Excellent quality if not rusted.
Sentry	N.Dak.	1954	yes	med.	strong	early	fair	good	good	good	fair	Sus. to black point and rust.
Langdon	N.Dak.	1956	yes	med.	med.	med.	mod.	fair	good	good	v.good	Distinct kernel type-some rust
Ramsey	N.Dak.	1956	yes	m.tall	m.weak	m.late	mod.	good	good	good	good	Carries some rust
Wells	N.Dak.	1960	yes	short	strong	early	good	good	good	good	v.good	Ely, strg.straw; good rust res.
Lakota	N.Dak.	1960	yes	short	strong	early	good	good	good	good	v.good	Like Wells, but lower test wt.

<sup>1/</sup> Refers to races prevalent since 1950, mainly 15 B.

<sup>2/</sup> Durums usually have adequate resistance to leaf rust. Langdon less resistant.

<sup>3/</sup> Durum breeding cooperative with USDA.

<sup>4/</sup> Applied to N. Dakota in nonrust years.

**Recommendations for 1963 Sowing:**

**FOR RUST AREAS** - Wells and Lakota offer good protection against stem rust. Langdon and Ramsey are susceptible to some races of stem rust and may show considerable rust in some years. Wells and Lakota have more rust resistance, are earlier ripening, and have shorter stronger straw. They have smaller kernels and require less seed per acre for planting and usually have a few more starchy kernels. Lakota tends towards a lower test weight.

**WHERE RUST IS LESS COMMON** - Lakota, Wells, Langdon and Ramsey.

## BARLEY - VARIETY DESCRIPTIONS

Variety	Origin	When re- leased	Awn S or R	Aleurone color	Height	Straw strength	Rel. maturity	Disease reaction <sup>1/</sup>				Rel. Yld. <sup>2/</sup>
								Stem rust	Loose smut	Spot blotch	Septoria	
<b>Malting class:</b>												
Trophy	N.Dak.	1961	R	white	med.	mod.	med.	R	MS	MS	S	v.good
Larker	N.Dak.	1961	S	white	med.	mod.	med.early	R	MS	MS	S	v.good
Traill	N.Dak.	1956	R	white	med.	mod.	med.	R	MS	MS	S	v.good
Kindred	N.Dak.	1942	R	white	med.	weak	med.early	R	MS	MS	S	good
Parkland	Can.	1956	S	blue	m.tall	mod.	med.late	R	MS	MS	S	v.good
<b>Feed class:</b>												
Tregal	N.Dak.	1942	S	white	m.short	mod.	med.	MS	R	MS	MS	v.good
Vantage	Can.	1947	S	white	med.	strong	late	R	MS	S	S	v.good
Keystone	Can.	1960	S	white	med.	strong	late	R	R	S	S	v.good
Husky	Can.	1953	S	white	med.	mod.	late	R	MS	S	S	v.good
Jubilee	Can.	1960	S	white	med.	mod.	late	R	MS	S	S	v.good
Liberty	S.Dak.	1957	S	white	m.short	strong	med.	R	S	S	S	v.good
Swan	Can.	1958	S	white	m.tall	strong	med.	R	MS	MS	S	good
Sioux <sup>3/</sup>	N.Dak.	1960	R	white	m.short	mod.	med.	MS	R	MS	MS	v.good
Betzes (2-row)	Mont.	1957	R	white	med.	weak	med.late	S	S	MS	S	v.good

<sup>1/</sup> R-resistant; S-susceptible; M-moderate.

<sup>2/</sup> Under North Dakota conditions.

<sup>3/</sup> State Seed Department

### Recommendations for 1963 Sowing:

All barley varieties are susceptible to leaf diseases which cause yield losses in some years. High temperatures and drouth ahead of ripening also have lowered many barley yields.

**FOR MALTING** - Trophy, Larker, Traill and Kindred. Trophy and Larker have plumper kernels than Traill or Kindred. Trophy and Larker should be marketed as pure one-variety carlots. Parkland is a blue malting barley. Varieties grading blue malting barley or 2-row varieties of malting quality have a limited market outlet as a premium crop.

**FOR FEED** - Tregal, Vantage, Husky, Trophy, Larker and Traill are all satisfactory. Keystone and Jubilee appear promising based on limited tests. Betzes (2-row) does well in western areas in rust-free years.

**Note:** Betzes a 2-row variety is grown in irrigated valleys of Montana where under a favorable environment it produces barley of acceptable malting quality. It also yields well in western dryland areas when rust and other diseases are not a factor, but is not recommended for the more eastern 6-row malting barley area.

## OATS - VARIETY DESCRIPTIONS

Variety <sup>5/</sup>	Origin	When re- leased	Color grain	Height	Straw strength	Resistance to:				Rel. Yld. <sup>2/</sup>	Rel. bu.wt. <sup>2/</sup>
						Stem rust <sup>1/</sup>		leaf rust	Smut		
						R7	R8				
<b>Early</b>											
Minhafer	Minn.	1957	yel.	short	strong	R	R	good	good	fair	good
Gopher	Minn.	1922	white	short	good	S	S	poor	mod.	good <sup>4/</sup>	fair
Burnett	Iowa	1956	yel.wh.	short	strong	R <sup>3/</sup>	R	mod.	good	good	good
Ransom	Ia.-N.D.	1956	yel.	short	mod.	R	R	mod.	good	fair	good
Russell	Can.	1960	white	m.short	strong	R	R	mod.	good	v.good	good
Minton	Minn.	1959	yel.	med.	mod.	R <sup>3/</sup>	R	good	good	good	good
Ajax	Can.	1942	white	m.tall	good	R	S	mod.	mod.	v.good	fair
Sauk	Wis.	1953	white	m.tall	strong	R	S	mod.	good	good	good
Garry	Can.	1952	white	tall	med. strong	R	R	white	good	v.good	good
Rodney	Can.	1953	white	tall	strong	R <sup>3/</sup>	R	mod.	good	v.good	good
Branch	Wis.	1951	yel.wh.	m.tall	med. weak	R	S	mod.	mod.	good	fair
Vicar (Hullless)	Can.	1957	amber	tall	med. strong	R	R	mod.	mod.	good	v.good
<b>Late</b>											

<sup>1/</sup> R-resistant; S-susceptible.      <sup>2/</sup> As applied to North Dakota.      <sup>3/</sup> Not to Race 7A.      <sup>4/</sup> In non-rust years.  
<sup>5/</sup> Listed in order of maturity.

### Recommendations for 1963 Sowing:

Races 7 and 8 of stem rust are the most prevalent in North Dakota. Race 7 is often more prevalent than Race 8. Most varieties available are not resistant to all races. Variety preference for rust areas is given to varieties with resistance to Race 7, if maturity and yields are favorable.

**FOR SOUTHEAST AND EAST WHERE RUST HAZARDS ARE GREATEST** - Early: Ransom, Burnett, Minton, Russell and Ajax. Late: Garry.

**FOR SOUTH CENTRAL AND WEST WHERE RUST HAZARDS ARE LESS** - Early: Gopher in western areas, Ajax, Minton, Burnett and Russell. Late: Garry, Rodney and Sauk.

**FOR NORTHEAST AND NORTH CENTRAL, LATER RIPENING VARIETIES CAN YIELD BETTER** - Medium late: Garry, Rodney, Sauk, Minton, Russell and Ajax. Early - for late planting: Ransom and Burnett.

## FLAX - VARIETY DESCRIPTIONS

Variety	Origin	When re- leased	Relative maturity	Color		Seed size	Plant height	Resistance to disease			Rel. yield	Oil yield	Oil quality
				flower	Seed			Wilt	Rust <sup>2/</sup>	Pasmo <sup>3/</sup>			
Sheyenne	ND <sup>1/</sup>	1945	early	bl.	br.	med.sm.	m.short	R	I	S	fair	fair	good
Marine 62	Minn.	1962	early	bl.	br.	med.sm.	med.	R	I	S	good	fair	v.good
Marine	ND <sup>1/</sup>	1951	early	bl.	br.	med.sm.	med.	R	I	MS	good	fair	v.good
Windom	Minn.	1962	early	bl.	br.	med.sm.	med.	R	I	S	good	fair	v.good
Bolley	ND <sup>1/</sup>	1957	early	bl.	br.	med.	med.	R	I	S	v.good	v.good	v.good
Linda	ND	1952	m.early	bl.	br.	large	med.	MR	MS	S	good	fair	fair
Norland	ND	1955	m.late	wh.	br.	large	med.	MR	R	S	good	good	good
Cree	Can.	1961	m.late	bl.	br.	med.sm.	med.	MS	I	S	good	good	good
Redwood	Minn.	1951	m.late	bl.	br.	med.	med.	R	I	S	v.good	good	good
Army	Minn.	1959	m.late	bl.	br.	med.	med.	R	I	MS	good	good	good
Deoro	ND	1944	late	pink	yel.	med.lge.	med.	MS	I	VS	v.good	good	good
B5128	ND	1943	late	bl.	br.	large	med.	MR	R	S	v.good	good	fair

<sup>1/</sup> Cooperative with USDA      <sup>2/</sup> (I) means immune to all races of rust known to exist in this area.      <sup>3/</sup> All varieties susceptible to pasmo - differences are only in degree of susceptibility.

### Recommendations for 1963 Sowing:

**EARLY** - under favorable seedbed conditions, B 5128, Redwood, Army and Bolley.

**LATE** - Earlier maturing varieties will yield better when sowing must be late, or in a season when late summer drouth or high ripening temperatures may cause more injury to later maturing varieties. Varieties which should have preference are Bolley and Marine. Marine 62, Windom and Cree not adequately tested.