EXTENSION SERVICE
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FARGO, NORTH DAKOTA 58103

North Dakota CROP VARIETY RECOMMENDATIONS and CHARACTERISTICS 1966

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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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with
assistance from several
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HARD RED SPRING WHEAT - Variety Descriptions

Variety	Origin 1/	When released	Beards	Height	Strength of Straw	Maturity	Resistance to: Stem rust 2/	Leaf rust 3/	Loose smut	Bunt	Rel. Yld. 4/	Remarks
Thatcher	Minn.	1934	no	short	strong	med. early	poor	v. poor	good	poor	good	Lacks resistance to 15B
Rescue	Canada	1945	no	short	weak	med. late	poor	poor	mod.	poor	low	Sawfly resistant
Chinook	Canada	1952	no	med.	weak	med. early	poor	poor	poor	poor	low	Sawfly resistant
Lee	Minn-N. D.	1951	yes	med.	med.	med. early	poor	fair	poor	fair	good	Some tolerance to 15B
Selkirk	Canada	1954	no	med.	med.	med. early	good	fair	good	good	good	Not immune from rust
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	fair	good	good	good	Flour quality above Selkirk
Justin	N. Dak.	1962	no	med.	strong	med. late	good	fair	mod.	fair	good	Excellent flour quality
Crim	Minn.	1963	yes	med.	weak	med.	good	poor	mod.	good	good	Suscept. to a black chaff disease
Chris	Minn.	1965	no	med.	weak	med.	good	good	good	mod.	good	Resist to leaf rust and weak straw
Manitou	Canada	1965	no	med.	weak	med.	good	good	good	poor	good	Resist to leaf rust and weak straw
Plainsman	P.R.N.Dak.	1963	no	med.	med.	med.	good	fair	-	-	-	Not sufficient data
Nordman	P.R.N.Dak.	1963	no	med.	med.	med.	good	fair	-	-	-	Not sufficient data
Forx	P.R.N.Dak.	1963	yes	med.	med.	med. early	fair	fair	-	-	-	Susceptible to stem rust
Valley	P.R.N.Dak.	1965	yes	med.	med.	early	fair	fair	-	-	-	Not sufficient data

1./ P. R. refers to private release.

2./ Refers to races prevalent since 1950, mainly 15B.

3./ Many varieties once regarded as resistant are lacking in resistance to races now prevalent in this area.

4./ Applied to North Dakota in non-rust years.

RECOMMENDATIONS FOR 1966 SOWING: - All recommended varieties are high in quality. Seasonal growing conditions and field differences will affect protein more than variety differences.

FOR RUST AREAS - Chris, Manitou, Justin, Pembina, Selkirk and Crim should have preference. Crim tends to have somewhat weaker straw and is more susceptible to leaf rust and black chaff than the other recommended varieties. Chris and Manitou seed supplies will not be generally available until 1967.

FOR WESTERN AREAS, WHERE RUST IS LESS COMMON - Canthatch, Crim, Justin, Chris, Manitou, Pembina and Selkirk 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 quite susceptible to leaf rust. Chris and Manitou seed supplies will not be generally available until 1967.

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[1] Variety Descriptions

Variety	Origin	When released	Beards	Height	Strength of Straw	Maturity	Resistance to: Stem rust 2/	Leaf rust 3/	Loose smut	Bunt	Rel. Yld. 4/	Remarks
Mindum	Minn.	1917	yes	tall	weak	late	poor	good	good	good	good	Excellent quality if not rusted.
Langdon	N. Dak.	1956	yes	med.	med.	med.	mod.	fair	good	good	good	Will rust badly some years.
Ramsey	N. Dak.	1956	yes	m. tall	m. weak	m. late	mod.	good	good	good	good	Will rust badly some years.
Wells	N. Dak.	1960	yes	short	strong	early	good	good	good	good	v.good	A few rust suscept. plants.
Lakota	N. Dak.	1960	yes	short	strong	early	good	good	good	good	v.good	Like Wells, but lower test wt.
Stewart 63	Canada	1963	yes	tall	m. weak	late	v. good	good	good	good	v.good	Good kernel size.

1./ Durum breeding cooperative with USDA.

2./ Refers to races prevalent since 1950, mainly 15B.

3./ Durums usually have adequate resistance to leaf rust.

4./ Applied to North Dakota in non-rust years.

RECOMMENDATIONS FOR 1966 SOWING: - WELLS, LAKOTA AND STEWART 63

Wells and Lakota offer good protection against stem rust, are early ripening, and have short strong straw. They have smaller kernels and require less seed per acre for planting and usually have a few more starchy kernels. Lakota tends to have a lower test weight. Stewart 63 has good kernel size and excellent stem rust resistance but is tall, weak strawed and about 1 week later in maturity than Wells and Lakota.

BARLEY - Variety Descriptions

Variety	Origin	When released	Awn S or R	Aleurone Color	Height	Straw Strength	Rel. maturity	Disease reaction 1/				Rel. Yld. 2/
								Stem rust	Loose smut	Spot blotch	Septoria	
Malting class:												
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	Canada	1956	S	blue	m. tall	mod.	med. late	R	MS	MS	S	v. good
Feed class:												
Tregal	N. Dak.	1942	S	white	m. short	mod.	med.	MS	R	MS	MS	v. good
Vantage	Canada	1947	S	white	med.	strong	late	R	MS	S	S	v. good
Keystone	Canada	1960	S	white	med.	strong	late	R	R	S	S	v. good
Husky	Canada	1953	S	white	med.	mod.	late	R	MS	S	S	v. good
Jubilee	Canada	1960	S	white	med.	mod.	late	R	MS	S	S	v. good
Unitan	Mont.	1961	S	white	m. short	mod.	med. early	S	MS	S	S	v. good
Yukon 3/	P. R. N. Dak.	1963	S	white	m. tall	mod.	med.	R	-	S	S	v. good
Betzes 4/	Mont.	1957	R	white	med.	weak	med. late	S	S	MS	S	v. good
For seed increase:												
Dickson	N. Dak.	1964	R	white	med.	mod.	med.	R	MS	R	MR	Excellent
Conquest	Canada	1965	S	blue	m. tall	strong	m. early	R	R	MS	S	v. good

1./ R-resistant; S-susceptible; M-moderate.
2./ Under North Dakota Conditions
3./ P. R. refers to private release.
4./ 2-rowed

RECOMMENDATIONS FOR 1966 SOWING:

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

FOR MALTING - Trophy, Larker, Traill, and Parkland. Trophy and Larker have plumper kernels than Traill. 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, Keystone, Husky, Yukon, Trophy, Larker and Traill are all satisfactory.

FOR SEED INCREASE - Dickson and Conquest

NOTE: Betzes,a 2-row variety is grown in irrigated valleys in 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 5/	Origin	When released	Color grain	Height	Straw Strength	Resistance to: Stem - rust 1/ R6	R7	Leaf rust	smut	Rel. Yld.	Rel. bu. wt. 4/
Brave	Ill.	1965	yel.	short	mod.	R2/	R3/	mod.	v. good	fair	good
Burnett	Iowa	1956	yel.wh.	short	strong	R2/	R3/	mod.	good	good	good
Gopher	Minn.	1922	white	short	good	S	S	poor	mod.	good	fair
Russell	Can.	1960	white	m.short	strong	R2/	R	mod.	good	v. good	good
Minton	Minn.	1959	yel.	med.	mod.	R2/	R3/	good	good	good	good
Ajax	Can.	1942	white	m.tall	good	S	R	mod.	mod.	v. good	fair
Lodi	Wis.	1963	yel.	tall	med.strong	R2/	R	good	good	good	good
Garry	Can.	1952	white	tall	med. strong	R2/	R	mod.	good	v.good	good
Rodney	Can.	1953	white	tall	strong	R2/	R3/	mod.	good	v. good	good
Ortley	S.Dak.	1963	white	tall	med. strong	R2/	R	good	mod.	good	v. good

1./ R-resistant; S-susceptible. 2./ Not to race 6A. 3./ Not to race 7A. 4./ As applied to North Dakota non rust years.
5./ Listed in order of maturity. Top variety earliest.

RECOMMENDATIONS FOR 1966 SOWING:

Races 6 and 7 of stem rust are the most prevalent in North Dakota. Race 6 is often more prevalent than Race 7. Most varieties available are not resistant to all races. Variety preference for rust areas is given to varieties with resistance to Race 6, if maturity and yields are favorable.

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

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

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

FLAX - Variety Descriptions

Variety	Origin	When released	Relative maturity	Color flower	Color seed	Seed size	Plant height	Resistance to disease: Wilt	Rust 2/	Pasmo 3/	Rel. yield	Oil yield	Oil quality
Norolta	Can.	1965	early	bl.	br.	Small	med.	MR	I	S	good	fair	fair
Bolley	N.D. 1/	1957	early	bl.	br.	med.	med.	R	I	S	v.good	v.good	v.good
Windom	Minn.	1962	early	bl.	br.	med.sm.	med.	R	I	S	v. good	fair	v.good
Summit	S. D.	1964	early	bl.	br.	med.	med.	R	I	S	v.good	fair	good
Norland	N.D.	1955	m.late	wh.	br.	large	med.	MR	R	S	good	good	good
Redwood	Minn.	1951	m.late	bl.	br.	med.	med.	R	I	S	v.good	good	good
B5128	N.D.	1943	late	bl.	br.	large	med.	MR	R	S	v.good	good	fair

1./ cooperative with USDA
2./ (I) means immune to all races of rust known to exist in this area.
3./ All varieties susceptible to pasmo and Aster yellows.

RECOMMENDATIONS FOR 1966 SOWING:

EARLY - Under favorable seedbed conditions, B5128, Redwood and Bolley. Norland in northwestern North Dakota only.

LATE - Early 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, Windom and Summit.

NOTE: All other varieties including Sheyenne, Marine, Marine 62, Linda, Victory, Arny, Deoro, Cree and others are susceptible to races of rust now present in North Dakota and should not be grown. Be sure the variety you sow is pure. If not send a sample to State Seed Dept., State Univ. Station, Fargo, N. Dak. for a varietal purity analysis.

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