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EXTENSION FOLDER 22

Revised January 1959

1959
**Varieties
of
Farm Crops**

"RECOMMENDED"

"NOT ADEQUATELY TESTED"

"NOT RECOMMENDED"

Crop Varieties

Tested by Minnesota

Agricultural Experiment Station

UNIVERSITY OF MINNESOTA
Agricultural Extension Service
U. S. DEPARTMENT OF AGRICULTURE

Refer to Minnesota Agricultural Experiment Station Miscellaneous Report 24 for data and descriptions of the varieties listed in this folder.

CERTIFIED SEED DIRECTORY

Registered and certified seed of most of the good varieties described in this bulletin can be purchased from growers listed in the Minnesota Registered and Certified Seed Directory. This annual publication can be obtained without charge from the Minnesota Crop Improvement Association, St. Paul Campus, University of Minnesota, St. Paul 1, Minnesota.

Varieties

of Farm Crops

THE CHIEF characteristics of the important varieties of farm crops grown in Minnesota are presented in tables in this folder. The varieties are included in three classes, i.e., (1) recommended, (2) not adequately tested, and (3) not recommended.

Recommended Varieties

Recommended varieties have been proved superior to other varieties in carefully conducted comparative tests. Trial plots are grown at the central station, at the branch experiment stations, in individual farmer's fields and in cooperation with county organizations in southwestern and in extreme north central Minnesota. In addition, the varieties are tested for disease resistance in the greenhouse and in special disease nurseries at St. Paul. Varieties of wheat, barley, flax, and soybeans are tested also in the laboratory for acceptability for industrial uses.

Except in unusual circumstances, a variety must have been tested in Minnesota for a minimum of three years before it is considered for recommendation. New varieties developed in other states or in Canada which are brought into the state for seed production or for use on farms before the three years of tests can be completed are listed as "not adequately tested." Information now available regarding these varieties is presented but no conclusions are drawn regarding their suitability under Minnesota conditions.

Those varieties which are in the "not recommended" category are inferior in one or more characteristics, as demonstrated in comparative tests. They are listed in this publication so that farmers will know of these characteristics and make their decisions accordingly.

The list of recommended varieties is determined each year at the Experiment Station Varietal Recommendation Conference. Staff members of the Departments of Agronomy and Plant Genetics, Plant Pathology and Botany, and Agricultural Biochemistry; representatives of Agricultural Extension; the super-

intendents and agronomists of the branch experiment stations at Waseca, Morris, Crookston, Grand Rapids, Duluth, and Rosemount; and representatives of the Minnesota Crop Improvement Association participate in the conference.

Varieties Eligible for Certification

The list of varieties eligible for certification by the Minnesota Crop Improvement Association includes the following: (1) varieties recommended by the University of Minnesota; (2) certain new varieties developed in other states or Canada that have not yet been adequately tested in Minnesota; and (3) non-recommended varieties of which Minnesota seed growers wish to produce seed for export to other states where those varieties are recommended.

For further information write to the Minnesota Crop Improvement Association. And remember that *certification does not always imply recommendation.*

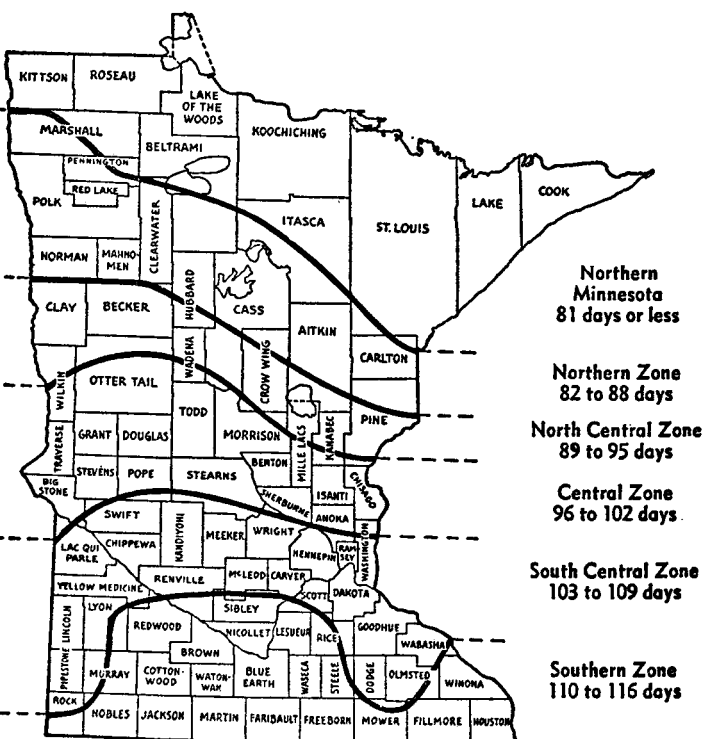


Fig. 1. Corn-soybean maturity zones in Minnesota

Maturity Regions in Minnesota

The corn-soybean area of Minnesota has been divided into six maturity zones (see figure 1). Days to maturity for corn refers to the approximate number of days of growing season that are required from emergence of the seedlings to that stage when the moisture in the ears on the standing plants is about 40 percent. At this time the kernels are well dented.

Disease Resistance

The following symbols are used to indicate degrees of resistance or susceptibility to disease: I = immune; R = resistant; MR = moderately resistant; MS = moderately susceptible; S = susceptible.

Oats

Variety	Yield	Plant height	Maturity	Lodging resistance	Seed color	Seed size	Bushel weight	Percent hull	Disease resistance			Smut	
									Stem rust races*	Crown rust†			
									7	7A	8		
Varieties recommended													
Ajax	High	Tall	Medium	Medium	White	Medium	Medium	Medium	R	R	S	S	S
Andrew	Medium	Medium	Early	Good	Yellow	Medium	Medium	Low	R	R	S	S	R
Burnett	Medium	Medium	Medium	Good	Yellow-white	Large	High	Low	R	S	R	MS	R
Garry	High	Tall	Late	Good	Yellow-white	Large	Medium	Medium	R	R	R	MS	R
Minhafer	Medium	Medium	Early	Good	Yellow	Large	High	Medium	R	R	R	R	R
Rodney	High	Tall	Late	Good	Yellow-white	Large	High	High	R	S	R	MS	R
Varieties not adequately tested													
Clintland 60	Medium	Medium	Early	Good	Yellow	Large	High	.....	R	S	R	R	R
Fundy	High	Tall	Medium	Good	Yellow-white	Large	Medium	.....	R	R	S	S	R
Vicar	High	Tall	Late	Good	Brown-white	Small	High	Hull-less	R	R	R	MS	R
Varieties not recommended													
Abegweit	Medium	Tall	Late	Poor	White	Large	Low	.....	R	R	S	S	S
Beedee	Medium	Medium	Medium	Medium	Brown-white	Large	Medium	.....	R	R	S	MS	R
Bentland	Medium	Medium	Medium	Medium	Yellow	Medium	Medium	.....	S	S	R	R	R

Oats (continued) . . .

Bonda	Low	Medium	Medium	Good	Yellow-white	Large	High	Medium	S	S	R	S	R
Branch	High	Tall	Late	Medium	White	Medium	Medium	High	R	R	S	MS	R
Cherokee	Low	Short	Early	Good	Yellow	Large	Medium	Medium	S	S	R	S	R
Clarion	Medium	Medium	Medium	Medium	Yellow	Large	High	.....	R	R	S	S	R
Clintland	Medium	Medium	Medium	Good	Yellow	Medium	High	Low	S	S	R	R	R
Fayette	Low	Short	Early	Medium	Yellow	Large	Medium	.....	R	R	S	R	R
Jackson	Medium	Medium	Medium	Good	Yellow	Medium	Medium	.....	R	R	S	S	R
Logan	Medium	Medium	Medium	Medium	Brown-yellow	Medium	Medium	.....	R	R	S	S	R
Minland	Medium	Medium	Early	Good	Light-brown	Medium	Low	Low	R	S	R	R	R
Mo. O-205	Medium	Medium	Medium	Good	Gray-red	Small	High	Low	R	R	S	MS	R
Nemaha	Low	Short	Early	Good	Yellow	Large	Medium	Medium	S	S	R	S	R
Newton	Low	Medium	Medium	Good	Brown-yellow	Large	Medium	.....	R	R	S	MS	R
Putnam	Low	Short	Early	Medium	Brown-yellow	Large	High	.....	S	S	R	S	R
Ransom	Low	Medium	Early	Good	Yellow	Medium	Medium	.....	R	R	R	MS	R
Sauk	High	Tall	Late	Medium	Yellow	Large	Medium	Medium	R	R	S	MS	R
Scotian	High	Tall	Late	Medium	Yellow-white	Large	Medium	.....	R	R	S	S	S
Shield	Medium	Medium	Early	Good	Yellow-white	Medium	Medium	.....	R	R	S	S	R
Simcoe	High	Tall	Medium	Medium	Yellow-white	Large	Medium	.....	R	R	S	S	S
Waubay	Medium	Medium	Medium	Good	Yellow	Large	High	Medium	R	R	S	S	R

* Races 7, 7A, and 8 are currently the most important ones.

† Varieties marked "R" to crown rust are resistant to the prevalent races in the region, but susceptible to certain races which have been prevalent in the southeastern states and have occurred in small amounts in the north central states.

Rye

Variety	Yield	Winter hardiness	Maturity	Height	Lodging resistance	Seed size	Bushel weight	Forage growth	
								Fall	Early spring
Varieties recommended									
Adams	High	Good	Medium	Tall	Medium	Medium	High	Medium	High
Caribou	High	Very good	Medium	Tall	Medium	Small	High	Low	High
Elk	High	Fair	Late	Medium	Good	Medium	Medium	Medium	Medium
Varieties not adequately tested									
Petkus*	High	Fair	Late	Short	Very good	Medium	High	Medium	Medium
Varieties not recommended									
Antelope†	High	Very good	Medium	Tall	Medium	Small	High	Low	High
Dominant	High	Fair	Late	Medium	Good	Medium	Medium	Medium	High
Emerald	Medium	Very good	Medium	Tall	Poor	Small	Medium	Medium	High
Imperial	Medium	Good	Medium	Tall	Medium	Medium	Medium	Medium	High
Pierre	Medium	Very good	Early	Tall	Good	Small	High	Low	High
Sangaste	Medium	Good	Late	Very tall	Good	Medium	Medium	High	High
Tetra Petkus	Medium‡	Poor	Very late	Tall	Very good	Large	Very low	Medium	Low

* This diploid strain is obtained from the F. von Lochow-Petkus, Ltd. of Hasselhorst, Germany and is distinctly different from the variety licensed as "Petkus" in Canada.

† Antelope cannot be distinguished from Caribou, except that in Minnesota it has yielded slightly less.

‡ Yields of Tetra Petkus are adversely affected by pollen from other rye varieties and vice versa. Therefore fields should be at least 100 feet from other rye varieties to get maximum yields. Isolation of large fields is not so important as it is for small plots. For seed certification, fields must be at least 660 feet away from any other rye variety.

Flax

Variety	Yield	Maturity	Plant height	Seed size	Color		Oil		Diseases		
					Seed	Flower	Content	Quality	Rust*	Wilt	Pasmo
Varieties recommended											
Army	Medium	Late	Tall	Medium	Brown	Blue	Medium	Medium	I	R	MS
B5128	High	Late	Medium	Medium	Brown	Blue	Medium	Low	I	MS	S
Bolley	Medium	Early	Medium	Medium	Brown	Blue	High	High	I	MR	S
Marine	Medium	Early	Medium	Small	Brown	Blue	Medium	High	I	R	MS
Redwood	High	Medium	Medium	Medium	Brown	Blue	Medium	Medium	I	MR	S
Varieties not recommended											
Crystal	Medium	Medium	Medium	Medium	Yellow	White	Medium	Medium	I	MS	MS
Dakota	Low	Medium	Medium	Medium	Brown	Blue	Low	Medium	S	R	S
De Oro (C.I.977)	Medium	Late	Medium	Medium	Yellow	Pink	Medium	Low	I	MR	VS
Koto	Medium	Medium	Medium	Medium	Brown	Blue	Medium	Medium	S	R	S
Linda	Medium	Medium	Medium	Large	Brown	Blue	Medium	Low	R	R	S
Minerva	Medium	Late	Medium	Medium	Yellow	Blue	High	Medium	R	MR	MS
Norland	High	Late	Medium	Large	Brown	White	Medium	Medium	R	MS	S
Raja	Medium	Early	Medium	Medium	Brown	Blue	Low	Low	R	MR	S
Rocket	Medium	Medium	Medium	Medium	Brown	Blue	Medium	Medium	R	R	S
Royal	Medium	Medium	Medium	Medium	Brown	Blue	Medium	Low	MR	MS	S
Sheyenne	Low	Early	Short	Small	Brown	Blue	Medium	Medium	I	R	MS
Victory	Medium	Medium	Medium	Large	Brown	White	Medium	Medium	MR	MS	VS

* Varieties marked I are immune to all races of rust found in Minnesota. The occasional rusted plants found in immune varieties are the result of mechanical mixing or natural crossing.

† Where late sowing is necessary, Marine is recommended.

Spring Wheat

Variety	Yield	Date mature	Plant height	Resistance to lodging	Awn type	Bushel weight	Quality	Stem rust	Leaf rust	Bunt	Loose smut	Scab
Varieties recommended												
BREAD WHEATS												
Lee	Medium	Early	Short	Medium	Bearded	High	Satisfactory	S	MS	S	S	S
Selkirk	High	Medium	Medium	Medium	Beardless	Medium	Satisfactory	MR	MR	R	R	S
DURUMS (for central and northwestern Minnesota only)												
Langdon	High	Early	Medium	Medium	Bearded	High	Satisfactory	MS	MR	R	R	S
Ramsey	Medium	Medium	Medium	Poor	Bearded	Medium	Satisfactory	MR	R	R	R	S
Varieties not recommended												
BREAD WHEATS												
Conley*	Medium	Late	Tall	Medium	Bearded	Medium	Satisfactory	R	S	R	MR	S
Henry	Medium	Medium	Tall	Medium	Bearded	Medium	Unsatisfactory	S	MS	MS	S	S
Mida	Low	Medium	Tall	Medium	Bearded	High	Satisfactory	S	S	MS	S	S
Rushmore	Low	Early	Medium	Medium	Beardless	High	Satisfactory	S	S	MR	MR	S
Russell	High	Medium	Tall	Medium	Bearded	Medium	Unsatisfactory	S	S	R	MS	S
Spinkota	Low	Medium	Tall	Poor	Bearded	High	Unsatisfactory	S	S	S	R	S
DURUMS												
Sentry	Medium	Early	Short	Medium	Bearded	High	Satisfactory	MS	R	R	R	S
Towner	Medium	Late	Tall	Poor	Bearded	High	Satisfactory	MR	R	R	R	S
Yuma	Low	Medium	Short	Medium	Bearded	Medium	Satisfactory	R	R	R	R	S

* Conley is susceptible to head blight complex.

Winter Wheat

Variety	Yield	Date mature	Plant height	Resistance to lodging	Winter hardiness	Awn type	Bushel weight	Quality	Stem rust	Leaf rust
Varieties recommended										
Minter	High	Early	Medium	Medium	High	Bearded	High	Satisfactory	S	S
Varieties not adequately tested										
Racine	High	Medium	Tall	Medium	Low	Bearded	Medium	.....	S	MS
Varieties not recommended										
Blackhawk	Medium	Medium	Tall	Medium	Medium	Bearded	Medium	Satisfactory	S	R
Iohardi	Low	Early	Medium	Medium	Medium	Bearded	High	Satisfactory	S	S
Minturki	Medium	Early	Medium	Medium	High	Bearded	Medium	Satisfactory	S	S
Nebred	Medium	Early	Medium	Medium	Low	Bearded	Medium	Satisfactory	S	S

Rate and Date of Sowing

Rates are based on an average seedbed and on use of good quality, medium-size seed of high germination. Increase rate for seed of lower germination or extra-large size. Decrease rate for small, good quality seed.

Crop	Bushel weight (in lb.)	Rate per acre	Date
BARLEY*	48	72-96 lb.	Early spring
CORN*	56	8-14 lb.	Early May
FLAX*	56	42-56 lb.	April 15 to May 15
FORAGE GRASSES (perennial)			
Bromegrass (with legumes)	14	5-8 lb.	Early spring or fall
Meadow fescue (in mixture with brome and legume)	14-24	3-4 lb.	Early spring or fall
Timothy (with legumes)	45	4-6 lb.	Early spring or fall
In mixture with brome and legume or reed canary		2-4 lb.	
Reed canary	44-48		
Alone or with timothy		6-8 lb.	Early spring or fall; after freeze-up
FORAGE LEGUMES (biennial or perennial)			
Alfalfa	60		With companion grain or flax, early spring; or alone before August 10
Alone		8-12 lb.	
With grasses		5-8 lb.	
Birdsfoot trefoil	60	3-6 lb.	Early spring
Clover	60		Early spring
Red (in mixture)		4-8 lb.	
Alsike (in mixture)		2-4 lb.	
Ladino (in mixture)		½-1 lb.	
Sweet clover	60		Early spring
Alone		10-12 lb.	
In mixture		2-4 lb.	
OATS*	32	64-80 lb.†	Early spring
RYE	56	70-84 lb.	August 1 to September 10 for pasture August 25 to September 30 for seed
SORGHUM*			
Corn planter rows	50 (sweet)		In warm soil, May 25 to June 15
"Solid" drilled	56 (grain)	4-8 lb.	
With 1½ bu. soybeans		25-30 lb.	
		15 lb.	
SUDANGRASS			
Alone	40		In warm soil, May 20 to June 20
Alone		25-30 lb.	
With 1½ bu. of soybeans		10 lb.	
SOYBEANS*			
"Solid" drilled	60		S, SC, C‡ zones, May 15; N, NC‡ zones, June 10. In warm soil, May 15 to 30
40-inch rows		120-150 lb.	
20-inch rows		60 lb.	
		90-100 lb.	
WHEAT*			
Bread	60		Early spring
Bread		75-90 lb.	
Durum		90 lb.	
Winter		75-90 lb.	August 10 to September 20
MISCELLANEOUS CROPS			
Field peas*	20		Early spring
Alone		120-150 lb.	
With 1-2 bu. of oats		30-90 lb.	
Sunflowers	24	4-8 lb.	May 10-25
Millet	50-56	25-40 lb.	June 15 to July 15
Rape	50	4-6 lb.	Early spring with oats
Buckwheat	48	48 lb.	June 15 to July 15

* Use fungicide seed treatment.

† When sown for pasture, use the higher seed rate.

‡ N—Northern Zone; NC—North Central Zone; C—Central Zone; SC—South Central Zone; S—Southern Zone. (Refer to the map, figure 1.)

Soybeans

The map of corn-soybean maturity zones is used to indicate areas of adaptation. Obviously certain varieties have wider adaptation than others, although a variety which is early in the southernmost zone indicated will probably be relatively late in the northernmost zone indicated.

Evaluations in the table for yield and height are relative and should be interpreted in terms of the maturity zones where best adapted. The maturity zones listed for each variety are in order of what is considered to be the best adaptation of the variety.

Soybeans . . .

Variety	Zone(s)* where adapted	Yield	Maturity	Plant height	Resistance to lodging	Seed size	Oil content
Varieties recommended							
Acme	N, NM	Medium	Very early	Short	Good	Medium	High
Capital	SC, C, S, NC	High	Early	Medium	Medium	Small	High
Chippewa	SC, S, C	High	Medium early	Tall	Very good	Medium	High
Comet	S and SC	High	Early	Tall	Good	Medium	High
Flambeau	C, NC, N	Medium	Very early	Short	Medium	Medium	Medium
Grant	C, SC, S, NC	High	Early	Medium	Good	Medium	High
Harosoy	S	High	Medium-late	Tall	Medium	Large	Medium
Norchief	NC, C	High	Early	Short	Good	Medium	High
Ottawa Mandarin	C, SC, S, NC	High	Early	Short	Very good	Large	Medium

Soybeans (continued) . . .

Variety	Zone(s)* where adapted	Yield	Maturity	Plant height	Resistance to lodging	Seed size	Oil content
Varieties not adequately tested							
Crest			Early	Medium		Medium	
Varieties not recommended							
Blackhawk		High	Medium	Tall	Good	Medium	High
Earlyana		Medium	Medium	Tall	Poor	Medium	Medium
Habaro		High	Medium	Medium	Medium	Large	Low
Hardome		Medium	Early	Tall	Poor	Medium	Medium
Harman		Medium	Late	Tall	Poor	Medium	Low
Hawkeye		Medium	Late	Tall	Good	Medium	High
Korean		High	Medium-late	Tall	Poor	Very large	Medium
Lincoln		Low	Very late	Tall	Medium	Medium	High
Manchu, Wis. 606		High	Medium	Medium	Poor	Medium	High
Mandarin, Wis. 507		Low	Early	Medium	Medium	Medium	Low
Monroe		Low	Medium early	Very tall	Medium	Small	Medium
Pridesoy 57		Low	Very early	Short	Good	Medium	Low
Renville		Medium	Medium early	Medium	Very good	Medium	Very high

* See map of corn-soybean maturity zones, figure 1.

Field Corn

The Minnesota Agricultural Experiment Station has discontinued the practice of recommending open-pedigree corn hybrids. For information on the important characteristics of hybrid field corn varieties sold in the state the reader is referred to the following publications of the Minnesota Agricultural Experiment Station.

Miscellaneous Report 20, "Maturity Ratings of Corn Hybrids in Minnesota." This report lists the maturity rating in days for each hybrid offered for sale in the state. Approximately 675 differently named hybrids are registered for sale. About 75 of these are open-pedigree hybrids sold under an experiment station name and number. The remainder are closed-pedigree hybrids

sold under a company brand name and number. The Minnesota Agricultural Experiment Station is required by law to test and rate all of these hybrids for maturity. The maturity rating appears on the tag attached to each bag of seed sold in the state.

Miscellaneous Report 28, "Minnesota Hybrid Corn Performance Trials." This report presents comparative data on both closed and open-pedigree hybrids for yield, ear moisture at harvest, root lodging, stalk breakage, and ear dropping. The closed-pedigree hybrids are those entered voluntarily by seed companies who pay a fee to cover the cost of testing. The open-pedigree hybrids are entered by the Minnesota Agricultural Experiment Station.

Sunflowers

Variety	Seed yield	Maturity	Height	Resistance to lodging	Seed			
					Size	Bushel weight	Per cent hull	Oil content
Varieties recommended								
Arrowhead	High	Early	Short	Good	Medium	High	Low	Medium
Varieties not recommended								
Advance	Medium	Medium	Short	Very good	Small	Very high	Low	High
Beacon*	Medium	Late	Medium	Good	Small	High	High	Medium
Greystripe	Medium	Late	Tall	Medium	Large	Low	High	Low
Manchurian	Medium	Late	Tall	Medium	Large	Low	High	Low
Mennonite	Medium	Medium	Short	Good	Large	Medium	High	Low
Sunrise	Low	Medium	Short	Good	Small	High	Low	High

* Most rust-resistant variety available.

Barley

All varieties listed are susceptible to leaf rust. Those indicated as resistant to stem rust have had very little rust in the field, although known to be susceptible to certain races. Those listed as resistant to loose smut are known to be quite susceptible to certain of its less-prevalent races. The spot blotch reactions,

though averages of several years, are subject to change with shifts in the prevalence of physiologic races. Of the varieties listed only Moore is definitely susceptible to net blotch. Herta is a two-rowed variety. All others listed are six-rowed.

Barley . . .

Name	Yield	Plant height	Maturity	Resist- ance to lodging	Seed size	Bushel weight	Malting quality	Disease reaction		
								Stem rust	Spot blotch	Loose smut
Varieties recommended										
Forrest*	Medium	Medium	Medium	Good	Medium	Medium	.....	R	MR	S
Kindred (L)	Medium	Medium	Early	Very poor	Medium	Medium	Very good	R	MS	S
Trall	High	Medium	Medium	Good	Medium	High	Good	R	MS	S
Varieties not adequately tested										
Liberty*	High	Medium	Medium	Good	Medium	Medium	.....	R	S	MR
Parkland*	Medium	Medium	Late	Good	Medium	Medium	.....	R	MS	S

Barley (continued) . . .

Name	Yield	Plant height	Maturity	Resistance to lodging	Seed size	Bushel weight	Malting quality	Disease reaction		
								Stem rust	Spot blotch	Loose smut
Varieties not recommended										
Barbless	Medium	Tall	Late	Poor	Medium	Medium	Medium	S	S	S
Feebar	High	Short	Medium	Very good	Large	Low	Very poor	R	MS	S
Fox	Low	Medium	Late	Good	Medium	Medium	Poor	R	MS	S
Herta	High	Medium	Late	Good	Medium	High	Poor	S	MS	S
Husky	Medium	Medium	Late	Medium	Small	Medium	Poor	R	S	S
Manchuria	Low	Medium	Medium	Poor	Medium	Medium	Good	S	MS	MS
Mars	Medium	Short	Early	Very good	Small	High	Poor	R	S	S
Montcalm	Medium	Tall	Late	Poor	Medium	Medium	Very good	VS	S	S
Moore†	Medium	Medium	Late	Good	Medium	Low	Poor	R	MS	S
O.A.C. 21	Low	Tall	Medium	Medium	Medium	Medium	Good	S	MS	MS
Peatland	Medium	Tall	Late	Good	Small	High	Poor	R	MR	MR
Plains	High	Short	Early	Good	Medium	Medium	Poor	R	MS	S
Tregal	High	Short	Medium	Medium	Medium	Medium	Poor	S	S	R
UM 570	Medium	Tall	Medium	Good	Medium	Medium	Poor	R	MS	S
Vantage	High	Medium	Medium	Good	Medium	Medium	Poor	R	VS	S
Vantmore	Medium	Medium	Late	Good	Small	Medium	Poor	R	MS	MS

* Malting quality not yet established.

† Very susceptible to net blotch.

Field Peas or Dry, Edible Peas

Field peas are also used as a forage crop, usually in mixture with oats. Chancellor or Dashaway are the best varieties for this purpose.

Variety	Seed yield	Maturity	Vine length	Seed		
				Size	Bushel weight	Color
Varieties recommended						
Chancellor	High	Medium	Long	Small	High	Cream
Dashaway	High	Medium	Long	Small	High	Cream
Varieties not adequately tested						
Sträl	High	Medium	Long	Medium	High	Cream
Varieties not recommended						
First and Best	High	Early	Long	Medium	Medium	Cream
O.A.C. 181	High	Medium	Long	Medium	High	Cream

Alfalfa

Variety	Forage yield*	Winter hardiness	Recovery after clipping	Diseases		
				Bacterial wilt	Common leaf spot	Black stem
Varieties recommended						
Ranger	Medium	Good	Medium	R	S	S
Vernal	High	Good	Medium	VR	S	S
Varieties not adequately tested						
Rambler		Good	Slow	R	S	S
Varieties not recommended						
Atlantic	Medium	Medium	Medium	S	S	S
Buffalo	Medium	Medium	Rapid	R	S	S
Cossack	Medium	Good	Medium	S	S	S
Du Puits	High	Medium	Rapid	S	MR	S
Grimm	Medium	Good	Medium	S	S	S
Ladak	High	Good	Slow	MR	S	S
Narragansett	High	Good	Medium	S	S	S
Nomad	Low	Medium	Slow	S	S	S
Rhizoma	Medium	Good	Medium	S	S	S
Socheville	High	Medium	Rapid	S	.....	S
Talent	Medium	Poor	Rapid	S	S	S
Williamsburg	Medium	Poor	Rapid	S	S	S

* Varieties are classified for yield when bacterial wilt and winter injury are not factors.

Medium Red Clover

Variety	Forage yield	Seed yield
Varieties recommended		
Dollard	High	High
Wegener	High	Medium
Varieties not recommended		
Commercial*	High	Medium
Kenland	Medium	Medium

* The information given applies to high quality Minnesota grown commercial.

Biennial Sweetclover

Variety	Forage yield		Seed yield	Time of maturity second year
	Seedling year	Second year		
Varieties recommended				
Evergreen	High	High	Medium	Very late
Madrid	High	Medium	Medium	Medium
Varieties not recommended				
Commercial white	Medium	Medium	Medium	Medium
Commercial yellow	Medium	Medium	Medium	Medium
Arctic	Low	Low	Low	Early
Alpha	Low	Low	Low	.....
Brandon Dwarf	Low	Low	Low	Early

Smooth Bromegrass

Variety	Forage yield	Seed yield
Varieties recommended		
Achenbach	High	Medium
Fischer	High	Medium
Lincoln	High	Medium
Varieties not recommended		
Canadian Commercial	Medium	Medium
Manchar	Medium	High

Birdsfoot Trefoil

Variety	Winter hardiness	Growth habit
Varieties recommended		
Empire	Good	Slightly prostrate
Varieties not adequately tested		
Viking	Rather good	Upright
Varieties not recommended		
Narrow leaf	Poor	Upright
European imported	Poor	Upright
Cascade	Poor	Upright
Granger	Poor	Upright

Sudangrass

Variety	Forage yield	HCN potential	Resistance to leaf spots
Varieties recommended			
Piper	High	Low	R
Varieties not recommended			
Sweet	Medium	High	R
Wheeler	High	Medium	S
Commercial	High	High	S

Timothy

Variety	Time of maturity	Forage yield	Seed yield
Varieties recommended			
Itasca	Medium	Slightly higher	Medium
Lorain	Late	Slightly higher	Slightly lower
Varieties not recommended			
Commercial	Medium	Medium	Medium

Kentucky Bluegrass

Variety	Seedling vigor	Rust resistance
Varieties recommended		
Park	Good	R
Varieties not recommended		
Merion	Poor	S



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Flax	9
Kentucky Bluegrass	23
Oats	6
Rye	8
Soybeans	14
Sudangrass	23
Sunflowers	17
Timothy	23
Wheat, spring, bread	10
Wheat, spring, durum	10
Wheat, winter	11
Rate and date of sowing	12-13

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