Varieties of Grain Crops for Saskatchewan 1968

DESCRIPTIONS AS PREPARED BY

The Saskatchewan Advisory Council on Grain Crops

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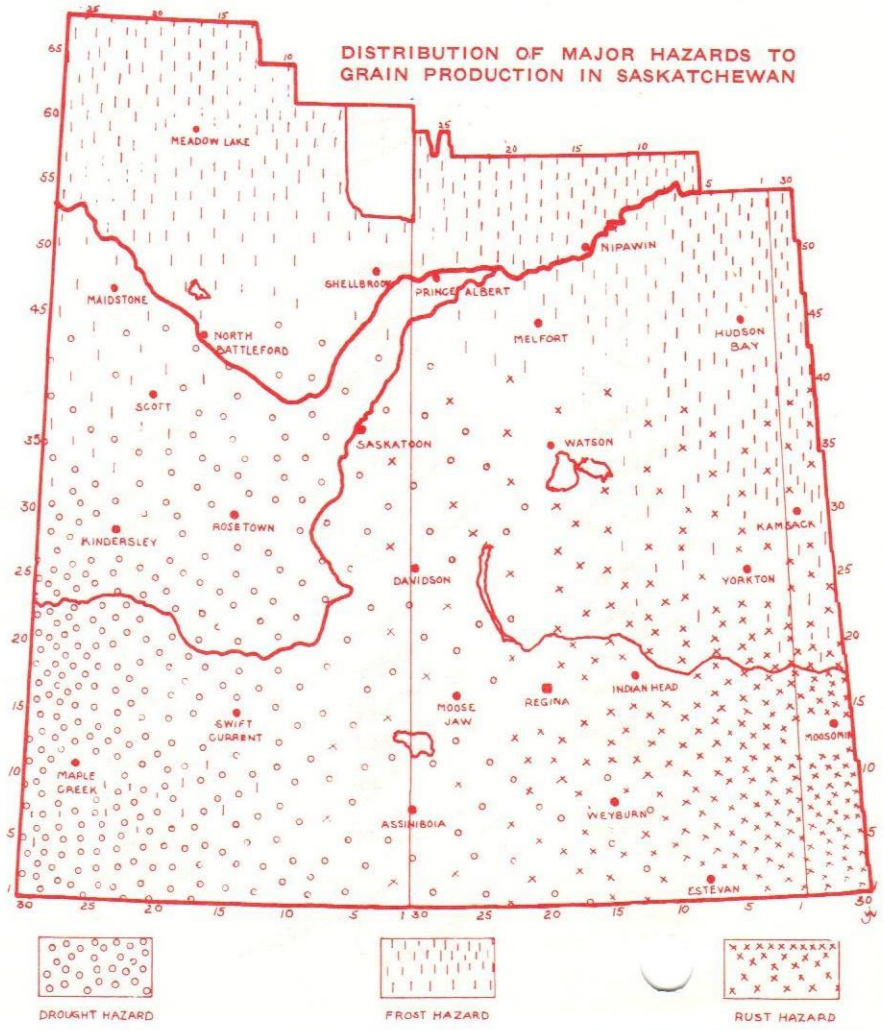
The following tables contain the main characteristics of commonly grown varieties of cereal crops, and of varieties that are new to many farmers. The comments are based on tests grown under a wide range of conditions.

Growers should choose varieties with characteristics best able to meet the crop hazards which experience has shown are most likely to occur under their conditions. Based on long time records, the map at the right indicates the distribution in the province of the major hazards affecting grain production. The relative yields of varieties depend on the conditions under which they are grown.

Additional information concerning these varieties, or varieties not mentioned in this pamphlet, can be obtained from Agricultural Representatives, Research Stations and the University.



BREAD AND DURUM WHEAT — Main Characteristics of Varieties

Type and Variety	Order of Maturity	Resistance to							
		Lodging	Stem Rust	Leaf Rust	Loose Smut	Bunt	Root Rot	Spring Frost Shattering	
Bread									
Canthatch	3	**Good**	Fair	Poor	**Good**	Poor	Fair	**Good**	**Good**
Chinook	3	Fair	Poor	Poor	Fair	Poor	Poor	Poor	Fair
Cypress	4	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Fair
Lake	5	**Good**	Poor	Poor	Fair	Fair	Poor	**Good**	Fair
Manitou	4	**Good**	**Good**	**Good**	**Good**	Poor	Fair	**Good**	**Good**
Park	1	**Good**	Poor	Poor	**Good**	Poor	Fair	**Good**	**Good**
Pembina	2	**Good**	**Good**	Fair	**Good**	Poor	Fair	**Good**	Fair
Rescue	3	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Fair
Selkirk	3	**Good**	**Good**	Fair	**Good**	Fair	Poor	**Good**	Fair
Thatcher	3	**Good**	Poor	Poor	**Good**	Poor	Fair	**Good**	**Good**
Durum									
Pelissier	7	Fair	Poor	**Good**	Fair	Poor	Poor	**Good**	**Good**
Ramsey	6	Fair	**Good**	**Good**	Poor	Fair	Poor	**Good**	**Good**
Stewart 63	7	Fair	**Good**	**Good**	Fair	Poor	Poor	**Good**	**Good**

COMMENTS:

Manitou is very similar to **Thatcher** but has good resistance to both stem and leaf rust. Like **Thatcher** and **Canthatch** it does well under dry conditions. It is a day or two later than **Thatcher** and **Selkirk.**

Rust, particularly leaf rust, is still a threat in Saskatchewan. **Manitou** provides the best resistance but **Selkirk** and **Pembina** are still reasonably satisfactory.

In 1967 sawflies increased in a number of areas of Saskatchewan. Farmers in these areas should consider using one of the sawfly-resistant varieties, **Rescue, Chinook** or **Cypress.** However, it should be kept in mind that these varieties tend to lodge and shatter more than **Thatcher, Canthatch** and **Manitou.**

BARLEY — Main Characteristics of Varieties

Type and Variety	Six or Two Rowed	Order of Maturity	Resistance to					
			Lodging	Stem Rust	Leaf Rust	Loose Smut	Covered Smut	Shattering
Feed								
Centennial	Two	4	Good	Poor	Poor	Poor	Poor	Good
Galt	Six	5	Fair	Good	— —	Poor	Good	Good
Jubilee	Six	6	Fair	Good	Good	Poor	Fair	Fair
Keystone	Six	5	Good	Good	Poor	Good	Good	Good
Eligible for C.W. Grades								
Conquest	Six	3	Good	Good	Poor	Good	Good	Fair
Gateway-63	Six	1	Fair	Poor	Poor	Poor	Poor	Fair
Parkland	Six	4	Fair	Good	Poor	Poor	Poor	Fair
Betzes	Two	4	Fair	Poor	Poor	Poor	Poor	Good
Compana	Two	2	Poor	Poor	Poor	Poor	Poor	Good
Hannchen	Two	5	Poor	Poor	Poor	Poor	Poor	Good
Palliser	Two	6	Fair	Poor	Poor	Poor	Poor	Good

COMMENTS:

Centennial is a two-rowed, rough awned variety of feed barley licensed in 1967. The eligibility for C.W. Grades will be determined on the basis of 1967 tests. This variety has shorter straw and better resistance to lodging than **Betzes**. It performs well in the Black and Grey soil zones. See the Table for other characteristics. Seed of **Centennial** will not be widely available until 1969.

Galt is a high yielding, six-rowed, semi-smooth-awned variety of feed barley. It is shorter than **Conquest** and about the same height as **Jubilee** but this short straw may or may not be a disadvantage depending upon growing conditions.

Conquest is the best malting barley variety.

Growers interested in two-rowed varieties should consider the merits of **Betzes** and **Palliser**.

Husky and **Montcalm** have been deleted from the Table because there are new and better varieties.

OATS — Main Characteristics of Varieties

Variety	Order of Maturity	Resistance to				Percent Hull
		Lodging	Stem Rust	Leaf (Crown) Rust	Smut	
Fraser	5	Good	Good	Fair	Good	Low
Garry	2	Good	Good	Fair	Good	High
Harmon	4	Good	Good	Fair	Good	Medium
Kelsey	3	Good	Good	Good	Good	Low
Rodney	4	Good	Fair	Fair	Good	Low
Sioux	1	Good	Good	Fair	Good	Medium

COMMENTS:

All oat varieties are susceptible to one or more races of rust. However, for best protection, **Harmon**, **Garry**, **Kelsey**, **Sioux** and **Fraser** are recommended. **Harmon** is similar to **Rodney** in performance but has better stem rust resistance. **Kelsey** has yielded well in eastern Saskatchewan and Manitoba. It has the best leaf rust resistance and the grain is highest in energy.

Fraser is a promising new rust resistant variety licensed in 1967. Seed will not be available in commercial quantities until 1969.

Grizzly was licensed in 1967. It is a rust susceptible variety with a high percentage of hull. **Grizzly** is not adapted to the prairie area.

Ajax, **Pendek**, **Russell** and **Victory** have been deleted from the Table because there are new and better varieties.

FLAX — Main Characteristics of Varieties

Variety	Order of Maturity	Resistance to		Oil Quality	Seed Size	Flower Color
		Rust	Wilt			
Noralta	2	Good	Good	Good	Small	Blue
Norland	3	Good	Fair	Good	Large	White
Raja	1	Good	Fair	Medium	Large	Blue
Redwood 65	3	Good	Good	Good	Medium	Blue

COMMENTS:

Flax rust overwinters in Saskatchewan and can attack susceptible varieties. All of the recommended varieties are resistant. **Norland** and **Redwood 65** are late maturing varieties and should be sown early for maximum yield. For delayed seeding and in northern areas, use the early maturing varieties **Noralta** and **Raja**. **Bolley** and **Rocket** have been deleted from the Table because there are new and better varieties.

RYE — Main Characteristics of Varieties

Type and Variety	Resistance to			Kernel		Head	
	Winter Killing	Shattering	Lodging	Color	Size	Length	Density
Fall Rye							
Antelope	**Good**	Poor	Poor	Variable	Small	Medium	Lax
Cougar	Fair	**Good**	**Good**	Green	Medium	Medium	Medium
Dakold 23	**Good**	Poor	Poor	Variable	Small	Medium	Lax
Frontier	**Good**	Fair	Poor	Green	Medium	Medium	Lax
Spring Rye							
Prolific	— —	Fair	Fair	Green	Medium	Medium	Lax

COMMENTS:

Fall rye should be seeded from August 20 to September 10 to provide the best conditions for winter survival and high yield. **Antelope**, **Cougar**, **Dakold 23** and **Frontier** are the only varieties that are sufficiently winter-hardy to be grown generally in Saskatchewan. Cougar is a new, short-strawed variety that is about two days later maturing than **Frontier** or **Antelope**.

Sangaste, **Petkus** and **Dominant** are usually winter damaged and therefore are far less dependable than varieties in the above group. Where they do survive, they provide good yields of a highly desirable type of grain.

RAPE

Rape is adapted to the parkbelt area of the province. Where drought is a hazard, rape frequently gives disappointing yields. Rape should never be sown on rape stubble because of insect and disease problems. Growers should check fields frequently and be prepared to apply insect control measures promptly.

Types and Varieties

Argentine type: The varieties **Target**, **Nugget** and **Tanka** are fairly tall growing and mature about the same time as wheat. **Target** yields more seed per acre and is one to two days earlier in maturity than the other varieties. Strains producing oil with no erucic acid are available only under contract production. They are equal to **Nugget** in yield and maturity. Varieties of the Argentine type should be sown as early as wheat to avoid frosted seed and s[illegible]ous loss of grades. For delayed seedings use only turnip rape varieties.

Turnip rape (Polish type): The varieties [illegible]**o** and **Arlo** are shorter growing, have smaller seeds, mature about three w[illegible] earlier and have seedlings more resistant to frost than varieties of the Argentine type. Echo is higher yielding than Arlo. Turnip rape varieties should be used in areas where the frost-free season is short or where seeding is delayed until late May or early June.

TAME MUSTARD

For information on types of tame mustard and their production see the Grain Crops section (page 54) of the Guide to Farm Practice in Saskatchewan, 1966.

SUNFLOWERS

Sunflowers can be grown in central and southern Saskatchewan. However, success is dependent upon early seeding, timely tillage and a long growing season. Sunflowers require 120 to 130 days to mature and are highly sensitive to 2,4-D drift. Sowing the varieties **Peredovik** or **Armavirec** on grain stubble in widely spaced rows as a partial summerfallow is suggested for trial. Contract production facilitates marketing.

TRITICALE AND FOREIGN WHEATS

The new crop, **Triticale**, is later maturing and yields fewer pounds per acre of grain than wheat, oats or barley. Although this new crop eventually may have a place in Canadian agriculture, the most advanced material presently available is not adapted to Saskatchewan.

Foreign wheat varieties with low milling and baking qualities were tested extensively in Saskatchewan in 1967. Some varieties gave high yields. However, since they are not hard red spring wheats it is not known what market there might be for them or what price they would bring. All aspects of their possible utilization are under intensive study.

SEED FACTS

The seed you sow is an important factor in crop production. Good seed should always be used. Good seed is sound, germinates well and produces strong healthy seedlings. It is practically free from disease, weed seeds and admixtures of other varieties and crops. **Pedigreed (Certified or Registered) seed is the best seed to buy**. The label assures that the standards of the Canada Seeds Act are met with regard to germination, purity of variety, freedom from weed seeds and other impurities. A good farm practice is to use a quantity of pedigreed seed frequently. Certified seed is available in bulk as well as in sealed sacks. An "over the quota" delivery privilege permits a farmer to exchange commercial grain for pedigreed seed. Registered seed is intended for use primarily by seed growers.

Commercial grain for use as seed should be tested for germination and weed seed content. Seed testing services are provided by the Plant Products Division, Seed Branch, Canada Department of Agriculture, in Edmonton, Saskatoon and Winnipeg, and by some grain companies.

Seed Cleaning

Commercial grain used for seed should be cleaned carefully to remove weed seeds, imperfect and small kernels and other impurities. Care should be taken to avoid contamination with other grain or seed-borne diseases. The use of specially designed cleaning plants is recommended in place of cleaning in country elevators which are not equipped to prevent mixing or contamination during handling.

Seed Treatment

Seed dressings have two main purposes. Those containing a fungicide are used in disease control; those containing an insecticide are used to control wireworms. Dual purpose seed dressings containing a fungicide and an insecticide are for the control of both diseases and wireworms.

Fungicides (both mercury and non-mercury compounds) are available which will give adequate control of those smuts that are carried on the surface of cereal seed; namely, bunt of wheat, all smuts of oats, and covered and false loose smut of barley. Further, fungicides afford some protection against seed rots and seedling blights. Some non-mercury compounds are satisfactory for the control of bunt of wheat but not for the other external smuts of cereals. Some other non-mercury compounds are recommended for the control of seed rots and seedling blights only.

Seed treatment with an appropriate fungicide is recommended for all flax seed, and for cereal seed carrying surface-borne smut. Poor seed such as that which contains much cracked grain, is discolored with smudge or black point or carries other diseases and germinates poorly, should be treated. Tests for the presence of surface-borne smuts are available through some grain companies. Sound cereal seed having high germination and freedom from or resistance to surface-borne smut may be sown without treatment.

When wireworms are a problem the seed should be treated with an insecticide. Seed treatments give better results on grain planted in fallow than on grain planted on stubble. Watch summerfallow crops for signs of wireworm damage; if damage is evident, plan to use a seed treatment on the next crop on summerfallow. Always follow recommended seeding practices. Deep seeding will reduce treatment effectiveness. Do not treat seed with an insecticide if the crop is to be grown for forage.

When treating seed follow the directions on the container label. Use only the recommended rates. Most seed dressings are highly poisonous and care should be taken in their use. Seed dressings carrying distinctive colored dyes are recommended. **It is unlawful to sell treated grain to commercial elevator companies. Treated grain should not be used as a feed.** The Canada Seeds Act requires that any grain seed treated with a poisonous substance and offered for sale shall be stained a conspicuous color and labelled as follows: "Poisonous; do not use as a feed. This seed has been treated with (name of poisonous substance)."

Loose smuts of wheat and barley are carried inside the seed and chemical seed dressings are not effective. These diseases can be controlled by the use of the resistant varieties shown above, and by the use of smut free seed for susceptible barley varieties (registered or certified seed known by the producer to be free of smut). Further, seed from a smutty barley crop can be effectively treated by the salt water soak method. (For procedure see your Agricultural Representative.)

OTHER INFORMATION RELATING TO GRAIN CROP PRODUCTION

Bulletins on fertilizers and weed control, generally revised annually, are available from sources given below. Information on plant diseases, insect pests and other aspects of production can be found in the Guide to Farm Practice in Saskatchewan, 1966. These publications may be obtained from Agricultural Representatives, Research Stations and the University of Saskatchewan.