

*Varieties of
Grain Crops for
Saskatchewan
1967*

DESCRIPTIONS AS PREPARED BY

The Saskatchewan Advisory Council on Grain Crops

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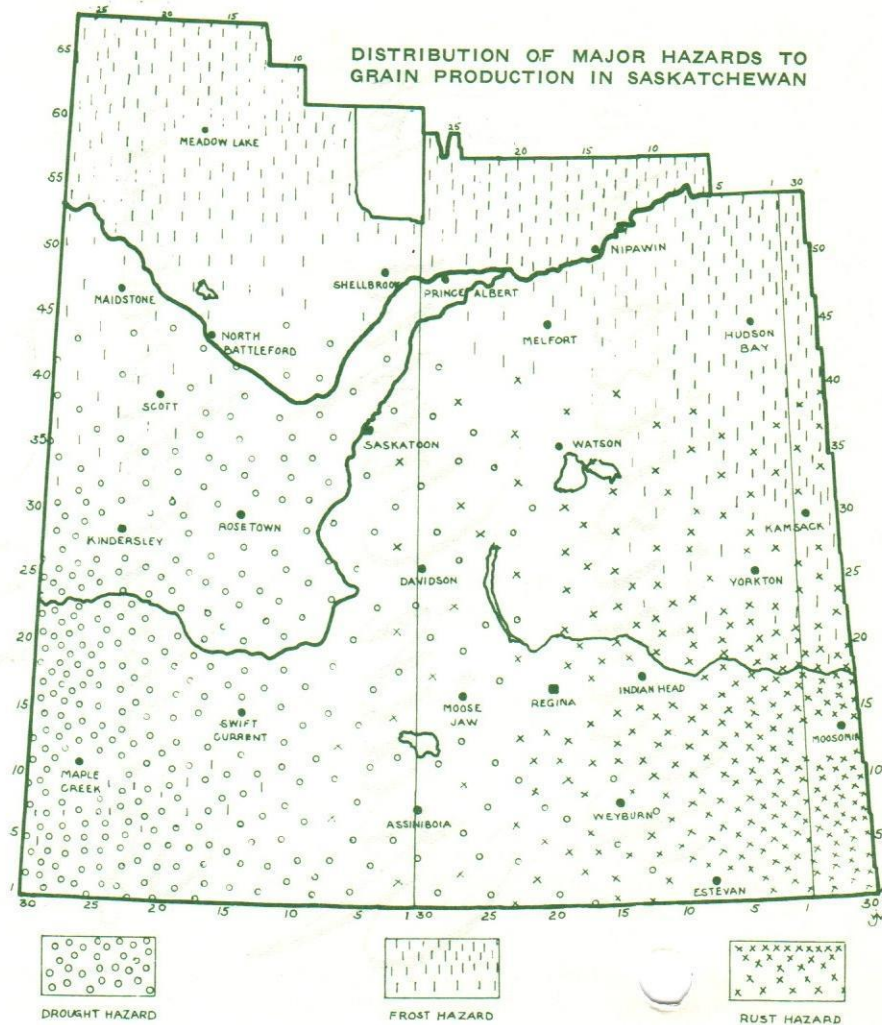


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The following tables contain the main characteristics of commonly grown varieties of cereal crops, and of varieties that are new to most farmers. The comments are based on the collective experience of agronomists who have tested varieties under a wide 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, Experimental Farms 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 a Thatcher type with resistance to both leaf and stem rust. Like **Thatcher**, it does well under dry conditions. In Saskatchewan it is usually one to two days later than **Selkirk** but in 1966 leaf rust hastened the ripening of **Selkirk**.

The rust resistance of **Selkirk** and **Pembina** is still reasonably satisfactory, however, **Thatcher** and **Canthatch** should be replaced with **Manitou**.

The sawfly resistant varieties **Chinook**, **Cypress** and **Rescue**, tend to lodge and shatter more easily than do the Thatcher type varieties and this should be considered when sawflies are not the main problem.

BARLEY — Main Characteristics of Varieties

Type and Variety	Six or Two Row	Order of Maturity	Resistance to							
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Variety	Rowed	Maturity	Lodging	Stem Rust	Leaf Rust	Loose Smut	Covered Smut	Shattering
Feed								
Galt	Six	6	Fair	Good	—	Poor	Good	Good
Husky	Six	7	Fair	Good	Good	Poor	Fair	Fair
Jubilee	Six	7	Fair	Good	Good	Poor	Fair	Fair
Keystone	Six	6	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
Montcalm	Six	5	Fair	Poor	Poor	Poor	Fair	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	6	Poor	Poor	Poor	Poor	Poor	Good
Palliser	Two	7	Fair	Poor	Poor	Poor	Poor	Good

COMMENTS:

Galt is a six-rowed, semi-smooth-awned variety of feed barley licensed in 1966. It is later maturing than **Conquest**, but two to three days earlier than **Husky**. **Galt** is shorter than **Conquest** and about the same height as **Jubilee**; this short straw may or may not be a disadvantage depending upon growing conditions. See table for other characteristics.

Conquest is the best malting barley variety.

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

OATS—Main Characteristics of Varieties

Variety	Order of Maturity	Resistance to				Smut	Percent Hull
		Lodging	Stem Rust	Leaf (Crown) Rust			
Ajax	1	Fair	Fair	Poor	Poor	High	
Garry	4	Good	Good	Fair	Good	High	
Harmon	6	Good	Good	Fair	Good	Medium	
Kelsey	5	Good	Good	Good	Good	Medium	
Pendek	2	Good	Poor	Poor	Poor	Medium	
Rodney	6	Good	Fair	Fair	Good	Low	
Russell	4	Fair	Good	Fair	Good	Medium	
Sioux	3	Good	Good	Fair	Good	Medium	
Victory	7	Poor	Poor	Poor	Poor	High	

COMMENTS:

All oat varieties are susceptible to one or more races of rust. However, for the best protection, **Harmon**, **Garry**, **Russell**, **Kelsey** and **Sioux** are recommended.

Harmon is similar to **Rodney** in performance, but has better stem rust resistance.

Kelsey has outyielded all varieties in eastern Saskatchewan and Manitoba, it has superior leaf rust resistance and its grain is higher in energy.

Sioux has yielded well in the drier areas of Saskatchewan.

Seed of **Kelsey** and **Sioux** will not be available for commercial use until 1968.

FLAX—Main Characteristics of Varieties

Variety	Order of Maturity	Resistance to		Oil Quality	Seed Size	Flower Color
		Rust	Wilt			
Bolley	3	Good	Good	Good	Medium	Blue
Noralta	2	Good	Good	Good	Small	Blue
Norland	4	Good	Fair	Good	Large	White
Raja	1	Good	Fair	Medium	Large	Blue
Redwood 65	4	Good	Good	Good	Medium	Blue
Rocket	4	Good	Fair	Good	Medium	Blue

COMMENTS:

Wherever flax is grown, rust is a hazard and it is risky to grow **Army**, **Cree**, **Marine** or **Redwing**.

Redwood 65 is an improved **Redwood**. Limited seed supplies will be available in 1967.

Noralta and **Raja** are early maturing varieties that are useful for delayed seeding and in the north. **Noralta** is well adapted to the black and grey soil zones, but frequently yields less than **Redwood** on the brown soil zones.

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
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 about August 20 to September 10 to provide the best conditions for winter survival and high yield.

Antelope, Dakold 23 and **Frontier** are the only varieties that are sufficiently winter-hardy to be grown generally in Saskatchewan. Of these three varieties, **Frontier** produces a more attractive grain sample.

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, Tanka, Nugget** and **Golden** are fairly tall growing and mature about the same time as wheat. The **Target** variety yields more seed per acre and is one to two days earlier in maturity than the other varieties. These varieties should be sown as early as wheat to avoid frosted seed and serious loss of grades. For delayed seedings use only turnip rape varieties.

Turnip rape (Polish type): The varieties **Echo** and **Arlo** are shorter growing, have smaller heads, mature about three weeks 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.

SEED FACTS

Good seed is an important factor in the production of high quality grain. Good seed has high germination and a high level of genetic purity; it is sound and is practically free from disease, weed seeds and admixtures of grains of other varieties and crops. Seed which bears a pedigree tag must meet standards with regard to purity of variety, germination, freedom from weed seeds and other impurities. A good farm practice therefore is to use a quantity of "certified" 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.

Commercial grain for use as seed should be tested for germination and weed seed content. Seed testing services are provided by the Canada Department of Agriculture, Plant Products Division, 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 such as mercury compounds 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 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 the other external smuts of cereals. Some non-mercury compounds are recommended for the control of seed rots and seedling blights only but are not generally used for cereal grains.

Seed dressings should be applied at the rates recommended on the label.

All flax seed should be treated with a fungicidal seed dressing.

Sound cereal seed having high germination and freedom from or resistance to surface-borne smut (see varietal tables above) is unlikely to yield more as a result of treatment with a fungicide. Seed carrying surface-borne smut should be treated. Tests for external smuts are available through some grain companies. If it is necessary to use seed that contains much cracked grain, is discolored with smudge or black point or carries other diseases and germinates poorly, it should be treated. Seed should be treated with insecticides when wireworms are a problem.

Seed dressings, especially those containing mercury, are highly poisonous. Care should be taken in their use. Seed dressings carrying distinctive coloured dyes are recommended. **It is unlawful to sell treated grain to commercial elevator companies and treated grain should not be used as feed.**

Loose smut of wheat and barley is 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.

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, Experimental Farms, and the University of Saskatchewan.