

*Varieties
of
Grain Crops
for
Saskatchewan
1960*

As Recommended by
The Saskatchewan Advisory Council on Grain Crops

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Recommended Varieties of Grain Crops for Saskatchewan for 1960

Varietal recommendations on grain crops for Saskatchewan are made each December by the Saskatchewan Advisory Council on Grain Crops.* This Council is composed of plant breeders and other specialists. In arriving at its recommendations the Council studies in detail the results of many yield tests. More than 300 yield tests are conducted each year by the Experimental Farms and the University of Saskatchewan. The results from these are supplemented by results from about 300 tests conducted by the Saskatchewan Wheat Pool. The tests are distributed throughout the province in a manner designed to provide information for each of the main soil types and climatic conditions. In addition to yield, such factors as resistance to disease, insect pests, shattering and lodging are considered in arriving at specific recommendations.

The varieties which are recommended are suitable for use over the relatively large areas represented by different zones. Local variations in soil and climate may result in a non-recommended variety giving better results than a recommended variety. For the greater number of farmers in a given zone, however, it is considered that the greatest returns will result from growing recommended varieties. Information on the local adaptation of varieties can always be obtained from the University or the nearest Experimental Farm.

BREAD WHEAT

Thatcher is one of the best varieties of bread wheat for milling and baking and is still the most widely adapted variety in Saskatchewan. It is recommended for all zones except the southeast where rust is a serious hazard. Thatcher has short, strong straw, is resistant to shattering, and therefore, is the best variety for straight combining. In addition, it is resistant to spring frost and is early in maturity. The kernels are small and tend to bleach when exposed to weathering. Thatcher is susceptible to race 15B of stem rust and to leaf rust.

Canthatch is very similar to Thatcher except that it has resistance to race 15B of stem rust. Like Thatcher it is very susceptible to leaf rust. Canthatch may be used to replace Thatcher but it **should not** be grown as a substitute for Selkirk in the rust area.

Lake has done particularly well in the western and northern cereal zones of the province, although it is usually two or three days later and is taller than Thatcher. It normally stands well but may tend to shatter at maturity. The

*The Council consists of representatives from the following agencies: (1) The Experimental Farms at Indian Head, Melfort, Regina, Scott and Swift Current, the Plant Products Division, the Saskatchewan Soil Survey, the Divisions of Entomology and Plant Pathology, all of the Canada Department of Agriculture. (2) The Field Husbandry, Biology, Chemistry and Extension Departments of the University of Saskatchewan. (3) The Plant Industry and the Agricultural Representatives Branches of the Saskatchewan Department of Agriculture. (4) The Saskatchewan Wheat Pool. (5) The Saskatchewan Branch, Canadian Seed Growers' Association.

kernels are larger but bushel weight is less than Thatcher and it may grade lower. It is susceptible to leaf rust and to race 15B of stem rust.

Selkirk has satisfactory resistance to both leaf rust and race 15B of stem rust. It has short, strong straw, however, it may shatter at maturity if left for straight combining. It matures about the same time as Thatcher. It has larger kernels than Thatcher but has lower bushel weight.

Pembina is better than Selkirk in resistance to both leaf and stem rust and provides an alternate variety where rust is a serious threat. Its milling and baking quality is superior to that of Selkirk. Pembina is a day or so earlier than Thatcher and is about equal in strength of straw. The kernels are slightly larger than those of Thatcher.

Rescue is the most sawfly resistant variety of bread wheat. It is not equal to the standard, Marquis, in milling and baking quality. For this reason it is recommended only where resistance to sawfly is needed. Rescue has slightly taller, weaker straw than Thatcher and shatters more. It is a day or so later than Thatcher. It has larger kernels and higher bushel weight than Thatcher. Rescue is susceptible to spring frost damage, leaf rust and race 15B of stem rust.

Chinook is a sawfly resistant variety which has good milling and baking quality and high bushel weight. It tends to be a little less sawfly resistant than Rescue. It is similar to Rescue in height, strength of straw and susceptibility to shattering. Like Rescue it is susceptible to spring frost, leaf rust and race 15B of stem rust.

DURUM WHEAT

Durum or macaroni wheats have proven valuable in the sawfly area because of their moderate resistance to this pest. They are often a week or more later in maturing than bread wheats and have much taller, weaker straw. For this reason they are not recommended in the northern areas. In general they are more susceptible to root rots than the bread wheats. In zones where they are recommended they usually yield as much as or more than the bread wheats.

Stewart is of good quality and is eligible for the top grades. It is late and has tall, moderately strong straw. Stewart is very susceptible to race 15B of stem rust but is resistant to leaf rust.

Ramsey is resistant both to race 15B of stem rust and to leaf rust. It has good quality and is eligible for the top grades. Like Stewart it is late but it is somewhat shorter and has stronger straw.

WINTER WHEAT

While winter wheat is not recommended for general use in Saskatchewan, it is being grown more or less satisfactorily in some parts of Zone 1C and with only occasional success in some parts of Zones 3B, 3H, 3J, 4A, and 4B. Winter wheat, where it winters successfully, may excel spring wheat in yield and has the

advantage of distributing harvesting over a longer period. There may be some difficulty in marketing this crop, because of the danger of mixing with spring wheat. Breeding and testing work on this crop is under way.

OATS

Where droughty conditions frequently occur, it is recommended that oats be sown early on summerfallow.

Garry is a medium maturing variety with wide adaptation. The straw is mid-tall and resistant to lodging. Garry is resistant to the smuts, stem rust and most races of crown (leaf) rust.

Rodney is later maturing than Garry but similar in length of straw and lodging resistance. It has large plump kernels which peel easily. Rodney is resistant to the smuts and most races of stem and crown (leaf) rust.

Exeter is a mid-tall variety that has a tendency to lodge. It matures later than Garry. Exeter is susceptible to the smuts, crown (leaf) rust, and some races of stem rust.

Eagle is a late maturing variety that is more likely to lodge than Garry. It is susceptible to the rusts and smuts.

Ajax is an early maturing variety with rather small kernels. It is mid-tall and has a tendency to lodge. Ajax is susceptible to the smuts, crown (leaf) rust and some races of stem rust.

Fortune is similar in maturity but more susceptible to lodging than Garry. It is resistant to the smuts but susceptible to crown (leaf) rust and some races of stem rust.

Victory is late maturing, mid-tall, and has a tendency to lodge. It is susceptible to the rusts and smuts.

VARIETIES RECOMMENDED FOR SPECIAL PURPOSES

Larain is an early maturing oat that may be used for late seeding. It is reasonably resistant to lodging but low yielding compared with the later maturing oats. It is susceptible to the rusts and smuts.

Torch and **Vicar** are medium late, hullless varieties resistant to the smuts and also to the prevailing races of stem rust.

BARLEY

Barley usually produces more feed units per acre than either wheat or oats. It has generally given better results when sown early on summerfallow, particularly on the dry open plains. Depending upon the variety, three classes of barley are recognized: feed (non-malting), malting and pearling. Following is a description of the recommended varieties in each of these classes.

Six-rowed Smooth Awned Feed Varieties.

Vantage is a medium late, medium strong-strawed barley. It is resistant to

stem rust but susceptible to leaf rust and both loose and covered smut. Frequently the awns are difficult to remove in threshing.

Husky is a high yielding, moderately strong-strawed barley. It tends to be a few days later in maturity than Vantage and has a tendency to shatter. It is not recommended for straight combining. Husky is resistant to stem rust, moderately susceptible to leaf rust and covered smut, and is susceptible to true loose smut.

Vantmore is very similar to Vantage in most characteristics. However, it has more resistance to some leaf diseases.

Six-rowed Smooth Awned Malting Varieties.

Montcalm is a blue seeded variety eligible for the highest malting grades. Compared with Vantage, it is slightly earlier in maturity but has considerably weaker straw. It is susceptible to stem and leaf rust and to loose smut, but moderately resistant to covered smut.

Parkland is a rust resistant, blue seeded variety eligible for the highest malting grades. Compared with Montcalm, it is equal in maturity but has stronger straw. It is moderately susceptible to the smuts.

Two-rowed Varieties.

Hannchen is a rough awned variety eligible for the highest two-row grades. Compared with Vantage, it is equal in maturity and has weaker straw, nevertheless it is reasonably satisfactory for straight combining. It is susceptible to both rusts and smuts. Because of the good quality and light colour of the seed, Hannchen is popular as a pearling barley.

Compana is a smooth awned barley which is eligible for the No. 3 C.W. Two-Row grade. Compared with Hannchen, it is earlier in maturity and has shorter straw. It is reasonably satisfactory for straight combining. It is susceptible to both rusts and smuts.

VARIETIES RECOMMENDED FOR SPECIAL PURPOSES

Olli, Titan and **Warrior** are early maturing varieties suitable for delayed seeding for wild oat control outside the rust area. Titan is a six-rowed, smooth awned feed barley. Olli is a six-rowed, rough awned malting variety with weak straw. It is susceptible to smuts and rusts and is generally lower in yield than the recommended varieties. Warrior is a six-rowed, hooded (awnless) feed barley with strong straw, but low bushel weight. It is susceptible to smuts and rusts.

RYE

Rye, particularly fall rye, is very useful on the lighter textured, droughty soils and is useful in annual weed and soil erosion control.

Dakold 23 (fall rye) is generally winter hardy, has fine straw and medium to small kernels of variable color.

Antelope (fall rye) is generally winter hardy, has fine straw and medium sized kernels of variable color.

Prolific (spring rye) is the recommended variety of spring rye.

Varieties Not Recommended

Dominant (fall rye) is not as winter hardy as Dakold 23. It has medium straw and medium large kernels of a uniform gray-blue color. Dominant is high yielding if there is no winter killing.

Petkus (fall rye) is not as winter hardy as Dakold 23. It has medium to thick straw and medium to large kernels of a uniform gray-blue color. Petkus is high yielding if there is no winter-killing.

Sangaste (fall rye) is not as winter hardy as Dakold 23. It has medium to thick straw and medium to large kernels of a uniform tan color. Sangaste is high yielding if there is no winter-killing.

Tetra Petkus (fall rye) is not winter hardy in Saskatchewan. It has thick straw and large kernels of a uniform gray-blue color. Tetra Petkus is high yielding where no winter-killing occurs.

FLAX

Normally a late maturing variety of flax will outyield an early maturing variety. However, an early maturing variety is recommended when late seeding is necessary, and in the northern areas, because of the frost hazard.

To control seed borne diseases, it is always advisable to treat flax seed with a recommended fungicide containing either mercury or captan. Fungicides should be applied at least 24 hours before seeding, except when otherwise specified by the manufacturer, and at recommended rates. In addition, as most flax diseases over winter on the straw, flax should not follow flax. All recommended varieties are susceptible to pasmo and aster yellows.

Redwood is a blue-flowered variety which is resistant to wilt and rust. It is medium late and is high in oil content and quality.

Norland is resistant to wilt and rust. It has white blossoms, large seeds and is high in oil content and quality. It is equal to Redwood in maturity.

Rocket is a blue-flowered, large seeded variety which is resistant to wilt and rust. It is medium late and is high in oil content and quality.

Redwing is a small seeded variety with blue flowers which is resistant to wilt and susceptible to rust. It is lower in yield and oil content than Redwood, but as it matures about a week earlier, it is useful where early maturity is essential and flax rust is not a problem.

Marine is resistant to wilt and rust and moderately tolerant to pasmo. Since it matures about a week earlier than Redwood it is useful for late seeding. It is similar to Redwood in flower color but has smaller seeds and a lower oil content.

Raja matures about a week earlier than Redwood and is therefore useful for

late seeding. It is rust and wilt resistant and has larger seeds and a lower oil content than Redwood. Raja is a blue-flowered variety that is sometimes short and low in yield.

RAPE

Rape is particularly adapted to cereal variety zones numbered 3 and 4. Varieties of the Argentine type (Golden, Argentine, Swedish) require about the same growing period as wheat. The Golden variety has good yielding ability and the seed has a higher oil content than that of other varieties. The Polish type is 2 to 3 weeks earlier, is shorter growing, has smaller seeds and usually yields less than varieties of the Argentine type. Arlo is a newly licensed variety of the Polish type. The Argentine type is more susceptible to damage from spring frost than the Polish type. The Polish type is recommended for those areas having a short frost-free season and also where seeding is delayed until late May or early June. The Polish type may be straight-combined whereas the Argentine type is usually swathed.

Because of disease problems, rape should not be sown on rape stubble.

FIELD PEAS AND BEANS

Peas. Dashaway and Chancellor are small, smooth, early maturing varieties of field peas which are popular in the split pea trade. Arthur is a large, smooth pea, later in maturing and also suitable for use as split peas and for cooking.

Dried peas differ greatly in cooking quality. Therefore peas from certain areas, in some years, may not be acceptable to the domestic cooking trade because of low quality. To help avoid disease problems peas should not be sown on pea stubble.

Beans. As beans are easily damaged by frost, earliness is of primary importance in selecting a variety to grow. The brown-seeded variety Norwegian, and the white-seeded variety Norwhite, have good cooking quality and mature early.

SEED FACTS

SEED GRAIN

The importance of producing high quality crops cannot be over emphasized. Only good seed of recommended varieties should be planted. Good seed has high germination and is sound, thus ensuring vigorous, uniform seedling growth. It is practically free from disease, weed seeds and admixtures of other varieties and crops.

Samples of any grain intended for seeding purposes should be tested for germination. Local elevator agents will accept samples for testing. However, for official germination tests, samples must be sent to Plant Products Division, 413 London Building, Saskatoon, together with a prepaid fee of 75 cents for each sample.

Registered and Certified seeds are the best seeds to buy. They assure purity

as to variety, have good germination, are practically free from disease, weed seeds and other varieties and crop kinds. Purchase of these classes of seed is worthwhile investment.

Information on sources and prices of Registered and Certified seeds is available from local elevator agents who are authorized to accept orders for seed. Seed also is available directly from seed dealers and seed growers. You also may contact your Agricultural Representative, the Field Husbandry Department, University of Saskatchewan, the Experimental Farms or the Plant Industry Branch, Saskatchewan Department of Agriculture about information on good seed.

SEED CLEANING

One should sow only clean grain for seed. The best procedure is to use home cleaning units or central cleaning plants specializing in these operations. Most commercial grain elevators are not equipped to clean grain for seed purposes. The practice of cleaning grain for seed at these elevators should be discouraged because it tends to spread weed seeds, disease and may result in admixtures of other varieties and crop kinds.

SEED TREATMENT

Mercury fungicides are available which will give adequate control of the surface-borne smuts, seed rots and seedling blights of cereals. There are also non-mercury compounds which are satisfactory **for the control of bunt of wheat only**. Wheat should be treated at least one day, and barley and oats at least one week, before seeding, except when otherwise specified by the manufacturer. Good seed can be treated well in advance of seeding. If treated seed is kept for over six months, it is advisable to check the germination before seeding. As a general rule tough or damp grain should not be treated with fungicides. Sound, disease-free seed may be sown without treatment. The best way to control true loose smut of barley is to sow smut-free seed, but the hot water treatment and the salt water soak treatments are effective.

For wireworm control seed dressings containing gamma isomer of benzene hexachloride (BHC, lindane), aldrin, or heptachlor, with or without a mercuric fungicide, will protect the crop from wireworm damage and will reduce the wireworm population when used **according to recommendations**. Seed dressings should be used *only on sound, dry seed*. Dusts may be applied anytime during the winter or spring prior to seeding. However, with liquid treatments follow instructions on the label especially in regard to storage.

GUIDE TO FARM PRACTICE IN SASKATCHEWAN

The booklet **Guide to Farm Practice in Saskatchewan** is being prepared and may be obtained from your Agricultural Representative; Experimental Farm; the Saskatchewan Department of Agriculture, Regina; the Extension Department, University of Saskatchewan.