Varieties of Grain Crops for Saskatchewan

1958

As Recommended by

The Saskatchewan Advisory Council on Grain Crops

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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

ALL VARIETIES EXCEPT SELKIRK ARE SUSCEPTIBLE TO RACE 15B OF STEM RUST

Thatcher is recommended for all zones except those where rust is a serious hazard. It has short, strong straw, early maturity and high resistance to shattering and spring frost damage. The kernels are small and tend to bleach when exposed to weathering. Thatcher is moderately resistant to common root rot and resistant to loose smut. It is susceptible to bunt and very susceptible to leaf rust.

Lake. Compared with Thatcher it is later in maturity, has longer straw of equal strength and larger kernels with less tendency to bleach. It is less resistant to shattering and is equal in bushel weight. Lake possesses considerable resistance

* 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.

to bunt but it is moderately susceptible to loose smut and common root rot. It is susceptible to leaf rust.

Selkirk is resistant to race 15B of stem rust and moderately resistant to leaf rust. Compared with Thatcher it has straw of equal length and strength, less resistance to shattering, and tends to be slightly lower in bushel weight. It is equal in maturity and has larger kernels with less tendency to bleach. Selkirk is resistant to bunt and loose smut.

Rescue is a sawfly resistant variety. Compared with Thatcher it has longer but weaker straw, less resistance to shattering and higher bushel weight. It is slightly later in maturity and has larger kernels with less tendency to bleach. Rescue is susceptible to spring frost damage, moderately susceptible to common root rot and susceptible to bunt, loose smut and leaf rust. Rescue does not meet the minimum milling and baking standards and for this reason, it is recommended only where sawfly infestations are severe.

Chinook is a sawfly resistant variety. Compared with Thatcher it has taller, weaker straw, less resistance to shattering and higher bushel weight. It is equal in maturity and has larger kernels with less tendency to bleach. Chinook is susceptible to spring frost damage, moderately susceptible to common root rot and susceptible to bunt, loose smut and leaf rust. Compared with Rescue, Chinook is taller and earlier, has higher bushel weight and is superior in milling and baking quality.

DURUM WHEAT

Durum (macaroni) wheats have proven valuable in the sawfly infested area because of their moderate resistance to this pest. Compared with bread wheats they are later maturing and weaker in the straw. 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 has moderately strong straw, is resistant to leaf rust but is very susceptible to stem rust race 15B. It is susceptible to bunt, moderately susceptible to common root rot and to loose smut.

Ramsey is of good quality and eligible for the top grades. It is resistant to the race 15B of stem rust. It is equal in maturity and has shorter, stronger straw than Stewart. It is similar in leaf rust resistance but more resistant to bunt than Stewart. It is moderately susceptible to loose smut.

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

Oats generally are more productive when sown early on summerfallow, particularly where hot, dry conditions are likely to occur.

Exeter is later maturing, mid-tall and has a tendency to lodge. It is susceptible to leaf rust and some races of stem rust; also to the smuts.

Ajax is early maturing, mid-tall, and has smaller kernels than Exeter. It is susceptible to leaf rust and some races of stem rust; also to the smuts.

Eagle is late maturing, mid-tall, and is less likely to lodge than is Exeter. It is susceptible to the rusts and smuts.

Fortune is of medium maturity and height. Compared with Exeter, Fortune is similar in most characteristics except that it is resistant to smut.

Garry is of medium maturity and height. Compared with Exeter, Garry is less likely to lodge and is more resistant to the rusts and smuts.

Rodney is late maturing and mid-tall. Compared with Exeter, it is less likely to lodge, has larger kernels with hulls that peel easily, and is more resistant to the rusts and smuts.

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

VARIETITES RECOMMENDED FOR SPECIAL PURPOSES

Larain and **Valor** are two very early maturing oats that may be used for late seeding. They are reasonably resistant to lodging, but are low yielding compared with the later maturing oats. Both are susceptible to the rusts and smuts.

Torch and **Vicar** are medium late, hulless 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, parti-

cularly 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.

Titan is considerably earlier in maturity and has stronger straw than Vantage. It is susceptible to stem and leaf rust, and to loose smut, but moderately resistant to covered smut. The awns are difficult to remove in threshing.

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 has been described under recommended varieties. 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

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

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

Tetra Petkus (fall rye) is not winter hardy in Saskatchewan, has thick straw and large kernels of a uniform gray-blue color. It 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, 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.

Rocket 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 Rocket in maturity.

Redwood is resistant to wilt and rust. It is medium late and is high in oil content and quality.

Redwing is a small seeded variety which is resistant to wilt and susceptible to rust. Compared with Rocket it is lower in yield and in oil content, but as it matures about a week earlier, it is useful where early maturity is essential.

Marine is resistant to wilt and rust and moderately tolerant to pasmo. It is early maturing and is therefore useful for late seeding. Compared with Rocket it has smaller seeds and a lower oil content.

VARIETIES RECOMMENDED FOR SPECIAL PURPOSES

Raja is an early maturing variety useful for late seeding. It is rust and wilt resistant, has large seeds and a lower oil content than Rocket. Raja is sometimes short and low in yield.

RAPESEED

Rapeseed is particularly adapted to cereal variety zones numbered 3 and 4. The Argentine type requires about the same growing period as wheat. The Polish type is 2 or 3 weeks earlier and much shorter than the Argentine type, but has smaller seeds and is lower yielding. The Polish type should be used in districts having a short frost-free period and where seeding is delayed until late May or early June. Golden is a new variety of the Argentine type having good yielding ability and a higher oil content.

While it is not necessary, it is probably safer to grow rape seed under contract to ensure disposal of the seed.

Because of disease problems rapeseed should not follow rapeseed.

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. Land that has produced peas may be disease infected. For this reason the crop should not be sown on pea stubble land.

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 overemphasized. One should sow good seed of recommended varieties. Good seed has high germination, is sound, thus ensuring a vigorous uniform early growth. It is practically free from disease, weed seeds and admixtures of other varieties and crops.

Germination tests should be made on all grain to be used for seed. Local elevator agents will accept samples for germination tests. Samples for official germination tests must be sent to Plant Products Division, 413 London Building, Saskatoon along with a prepaid fee of 75 cents for each sample.

Registered and Certified seeds are the best seeds to buy. They assure purity of variety, have good germination, are practically free from disease, weed seeds, other varieties and crop kinds. The purchase of this class of seed is a worthwhile investment.

Information on sources and prices of good seed is available through your local elevator agent. He can accept your order. You may also contact your Agricultural Representative, seed dealers, the University, the Experimental Farms, the Saskatchewan Department of Agriculture, or seed growers.

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 on wheat only.** Wheat should be treated at least one day, and barley and oats at least one week, before seeding. 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. Under no circumstances should tough or damp grain be treated with fungicides. Sound, disease-free seed may be sown without treatment.

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. They may be applied anytime during the winter or spring prior to seeding.

GUIDE TO FARM PRACTICE IN SASKATCHEWAN

The booklet **Guide to Farm Practice in Saskatchewan** has been revised. A copy may be obtained from your Agricultural Representative; Experimental Farm; the Saskatchewan Department of Agriculture, Regina; the Extension Department, University of Saskatchewan.