Varieties of Grain Crops for Saskatchewan

1957

As Recommended by

The Saskatchewan Advisory Council on Grain Crops

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CO-OPERATIVE AGRICULTURAL EXTENSION PROGRAMME

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THE SASKATCHEWAN ADVISORY COUNCIL ON GRAIN CROPS,* known previously as the Saskatchewan Cereal Variety Committee, was formed in 1928 and functions under the Saskatchewan Advisory Committee on Agricultural Services. It is composed of plant breeders and other specialists who meet annually in December to draw up recommendations for the coming year on the basis of a large number of accurate varietal tests.

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 than Thatcher but is equal in bushel weight. Lake possesses considerable resistance 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

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* This Council is composed of: the Cerealists from the Experimental Farms at Indian Head, Swift Current, Scott, Melfort and Regina, and the Field Husbandry Department, University of Saskatchewan; representatives from the Plant Industry Branch, and the Agricultural Representative Service, Department of Agriculture, Regina; District Supervisor, Plant Products Division, Saskatoon; Soil Specialist, Experimental Farms Service, Canada Department of Agriculture, Saskatoon; Director, Junior Co-operative Tests, Saskatchewan Wheat Pool, Regina; Entomologist, Field Crops Insect Laboratory, Saskatoon; Officer in Charge, Dominion Plant Pathology Laboratory, Saskatoon; Representative, Department of Extension, Plant Pathologist and Cereal Chemist, University of Saskatchewan, Saskatoon; representative of the Saskatchewan Branch, Canadian Seed Growers' Association.

resistance to shattering, equal bushel weight, 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 weaker straw of equal length, less resistance to shattering, higher bushel weight, 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 is below the standard for milling and baking quality. For this reason it is recommended only where resistance to sawfly is needed.

Chinook is a sawfly resistant variety. Compared with Thatcher it has taller, weaker straw, less resistance to shattering, higher bushel weight, 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.

LICENSED VARIETIES NOT RECOMMENDED

Apex, Garnet, Lee, Marquis, Red Bobs, Redman, Reliance, Renown, Reward, Regent.

Lee was removed from the recommended list in 1957 *because of its susceptibility to race* 15B *of stem rust and to loose smut.*

DURUM WHEAT

THE LISTED VARIETIES ARE VERY SUSCEPTIBLE TO RACE 15B OF STEM RUST

Durum or macaroni wheats have proven valuable in the sawfly infested area because of their moderate resistance to this pest. They are later maturing and weaker in the straw but, 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 15*B*, and is susceptible to bunt and moderately susceptible to common root rot.

Pelissier is inferior in quality and cannot be graded above Extra No. 4 C.W. However, it usually outyields Stewart especially in the drier areas of the province. Compared with Stewart, it has stronger straw and is later in maturity. It is resistant to leaf rust but susceptible to stem rust, bunt and common root rot.

LICENSED VARIETIES NOT RECOMMENDED

Carleton, Mindum, Nugget.

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 if hot, dry conditions are likely to occur.

Exeter is late 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.

VARIETIES RECOMMENDED FOR SPECIAL PURPOSES

Larain and **Valor** are two very early maturing oats. 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.

LICENSED VARIETIES NOT RECOMMENDED

Banner, Brighton, Gopher, Laurel, Vanguard.

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. In the more moist parts of the eastern and northern zones, varieties of barley acceptable to the malting trade can be grown successfully.

Six-rowed Smooth Awned Feed Varieties.

Husky is a moderately strong strawed feed barley. Compared with Vantage, it is slightly later in maturity and has a greater tendency to shatter. It is resistant to stem rust, moderately susceptible to leaf rust and covered smut and is susceptible to loose smut. Husky threshes easily.

Vantage is a medium late, medium strong strawed feed 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.

Vantmore is a feed barley. Compared with Vantage, it is very similar in most characteristics. However, Vantmore has more resistance to some leaf diseases. The awns are difficult to remove in threshing.

Velvon 11 is a feed barley. Compared with Vantage, it is slightly earlier in maturity and has considerably weaker straw. It is susceptible to both leaf and stem rust and also to covered and loose smut. The awns are difficult to remove in threshing.

Titan is a feed barley recommended only for the southwestern area of the province. Compared with Vantage, it is considerably earlier in maturity and has stronger straw. 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 feed barley. Compared with Hannchen, it is earlier in maturity but has shorter straw. It is susceptible to both rusts and smuts. It is reasonably satisfactory for straight combining.

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.

LICENSED VARIETIES NOT RECOMMENDED

Gateway, Newal, O.A.C.21, Plush, Sanalta.

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 is a winter hardy, high yielding fall rye.

Antelope fall rye is higher in yield, has a slightly larger kernel and more winter hardiness than Dakold.

Tetra Petkus fall rye is not recommended because of lack of winter hardiness.

Prolific is the recommended variety of spring rye.

FLAX

To control flax diseases it is advisable to treat the seed every year with a mercury fungicide or with Orthocide 75, at the recommended rates, at least 24 hours before seeding. In addition, as most flax diseases over-winter on the straw, flax should not follow flax. All recommended varieties are susceptible to pasmo. An early maturing variety is recommended where late seeding is necessary.

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 exceptionally high in oil content and quality.

Redwing is resistant to wilt and susceptible to rust and has small seeds. Compared with Rocket it is lower in yield 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, but compared to Rocket, has smaller seeds and lower oil content.

VARIETIES RECOMMENDED FOR SPECIAL PURPOSES

Raja is an early maturing variety useful for delayed seeding. It is rust and wilt resistant, has large kernels and high oil content. Raja is often short and low in yield except when sown late.

LICENSED VARIETIES NOT RECOMMENDED

B.5128, Dakota, Royal, Sheyenne, Viking.

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.

FIELD PEAS AND BEANS

To ensure sale of the seed, peas and beans should be grown under contract.

Peas. Dashaway, an early variety, and Arthur a late variety, are suitable for the split pea trade and satisfactory for combining.

Beans. The large white seeded varieties, Great Northern and Norwhite, and the large brown seeded variety, Norwegian, all have high cooking quality. Norwegian and Norwhite are early but Great Northern is medium late.

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 of 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.