

IMPORTANT POINTS ON SEEDS AND SEEDING

1. **Good seed** is plump, high in germination percentage, free from weed seeds, pure as to variety and is sound. Much of the grain on hand is of impaired vitality; that held over from 1950 was injured by frost and part of the 1951 crop is damp.

2. **Frozen grain** used as seed may produce seedlings of low vitality. This is particularly true where the damage is severe. Shrivelled seed should be removed by rigorous cleaning.

3. **Damp grain:** Wheat, oats, barley containing more than sixteen per cent. of moisture, rye with over $13\frac{1}{2}$ per cent., or flax seed with over $12\frac{1}{2}$ per cent. should not be used for seed if satisfactory dry seed grain is available or procurable. Normally ripened, dry grain is considered preferable to grain that has been threshed damp, even though the latter has been dried and germinates well. Damp grain should be dried for two or three weeks at room temperature or longer at lower temperatures before a germination test is made.

4. **Germination tests** should be made on all grain used for seed. When it is not possible to have an official test (costing seventy-five cents) made by the Plant Products Laboratory, Federal Building, Saskatoon, emergence from a two inch depth in sand or sandy soil gives a fairly reliable indication of field emergence under good conditions.

5. **Seed treatment:** Mercury fungicides control the smuts, excepting loose smut of wheat and true loose smut of barley, and give stronger stands by controlling other seed borne diseases particularly if the seed's vitality has been impaired. They may be used well in advance of seeding if the grain is dry. Under no conditions should tough or damp grain be treated with these preparations. Seed that is known to be sound and disease-free may be sown without treatment.

6. **Depth of seeding** is influenced by three main factors; the kind of seed, the depth of the moisture and the firmness of the seed bed. Tillage practice should, as far as possible, be designed to give a firm seed bed with moisture close to the surface. The seed should be sown into the moist soil.

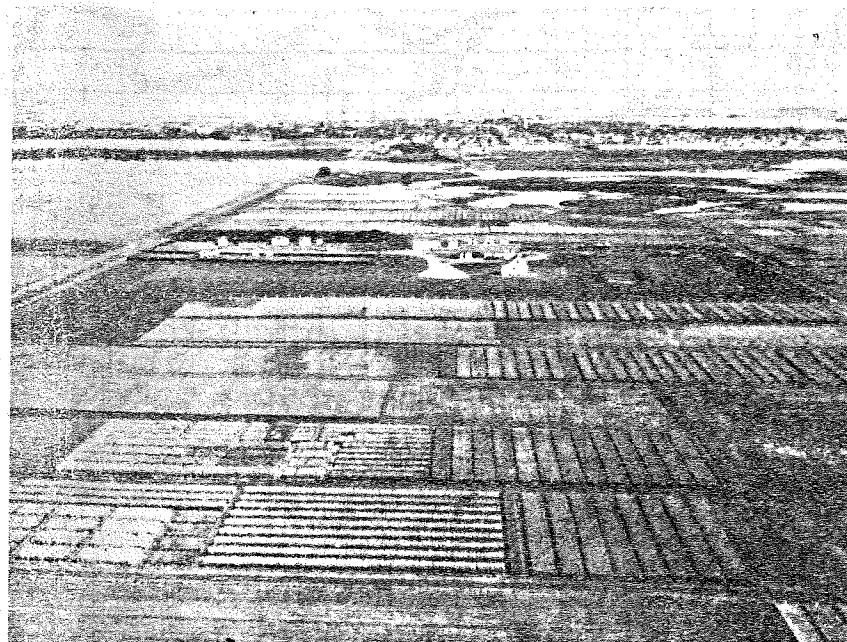
7. **Registered and Certified** seed are guaranteed as to purity of variety, germination percentage, freedom from objectionable weed seeds, and practical freedom from disease and seeds of other crops. A farmer should buy enough registered seed every year to produce seed for his commercial acreage of each crop the next year.

8. **Seed grain** is obtainable from the various seed companies, the University and Experimental Stations and from seed growers advertising in the farm papers. Orders for seed grain may be placed with any elevator agent. Information on seed prices and sources may be obtained from your Agricultural Representative, the Plant Products Division, Federal Building, Saskatoon, the Plant Industry Branch of the Saskatchewan Department of Agriculture, Regina, or your local elevator agent.

VARIETIES of Grain Crops

for Saskatchewan

1952



AERIAL VIEW OF THE NEW EXPERIMENTAL STATION AT REGINA

As Recommended by
The Saskatchewan Cereal Variety Committee

PUBLISHED UNDER AUTHORITY OF THE SASKATCHEWAN
CO-OPERATIVE AGRICULTURAL EXTENSION PROGRAMME

Recommended Varieties of Grain Crops for Saskatchewan for 1952†

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. The committee meets 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 Dominion Experimental Station.

BREAD WHEAT

These varieties are resistant to stem rust (excepting for Race 15B)

Thatcher has wide adaptability and is recommended for all zones. It has short, strong straw, early maturity, high resistance to shattering and spring frost damage. The kernels are small and tend to bleach when exposed to weathering. It is moderately resistant to common rootrot and resistant to loose smut, but susceptible to leaf rust and bunt.

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Rescue. Compared with *Thatcher* it is sawfly resistant, has weaker straw of equal length, slightly later maturing, with slightly less resistance to shattering. It is susceptible to spring frost damage. The kernels are larger, brighter and have less tendency to bleach. It is moderately susceptible to common rootrot and susceptible to bunt, loose smut and leaf rust. The baking quality is inferior to that of *Thatcher*, and therefore *Rescue* is recommended only where resistance to sawfly is needed.

Redman. Compared with *Thatcher* it has straw of equal length and strength, slightly earlier maturity and equal resistance to shattering. It is moderately susceptible to spring frost damage. The kernels are larger and have less tendency to bleach. *Redman*, although resistant to some races of leaf rust, is susceptible to those prevailing at the present time. It is resistant to bunt, moderately resistant to loose smut and moderately susceptible to rootrot.

Apex 2177-The New Improved Apex. Compared with *Thatcher* it has somewhat weaker straw, slightly later maturity and equal resistance to shattering. It is moderately resistant to spring frost damage. The kernels are slightly larger and brighter. It is moderately resistant to rootrot, bunt and loose smut and moderately susceptible to leaf rust. It has longer straw, higher bushel weight and less tendency to bleach than *Thatcher*.

LICENSED VARIETIES NOT RECOMMENDED

Garnet, Marquis, Red Bobs, Regent, Reliance, Renown.

NEW LICENSED VARIETIES UNDER TEST

Lee, Saunders.

DURUM WHEAT

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 stem rust (excepting Race 15B) and leaf rust, but is susceptible to bunt and moderately susceptible to common rootrot.

Pelissier is inferior in quality and not eligible for grades above 3 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 susceptible to stem and leaf rust, bunt and common rootrot.

LICENSED VARIETIES NOT RECOMMENDED

Carleton, Mindum.

WINTER WHEAT

While winter wheat is not recommended for general use in Saskatchewan, it is being grown more or less satisfactorily in Zones 1C and with only occasional success in some parts of Zones 3B, 3H, 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. It should be noted that some difficulty may be encountered in the marketing of this crop, because of the danger of mixing with spring wheat. Breeding and testing work on this crop is under way.

OATS

In the drier parts of the province, especially in Zone 1, it is recommended that oats should be sown early on summerfallow.

Exeter is a late large seeded variety that has proven to be the highest yielding oat in most zones for which it has been recommended. It is tall and has slightly weak straw. It is resistant to most but not all races of stem rust and is moderately susceptible to leaf rust and smuts.

Fortune is similar to Exeter in type of kernel, bushel weight and rust resistance. It is resistant to smut, a little stronger strawed and ripens about the same time or slightly earlier than Exeter. In zones where both Fortune and Exeter are recommended Fortune usually yields less than Exeter. This is especially true in the north-easterly zones, but there is little difference in their yields in other parts of the province. This variety has about ten per cent. less hull than Exeter and its grain has been shown to be higher in protein content than Exeter.

Ajax is earlier maturing than Exeter. It is similar to Exeter in height, strength of straw and stem rust resistance. It has moderate resistance to leaf rust and the smuts. Its kernel is slightly smaller, but it equals Exeter in bushel weight. Ajax yields are very similar to either Exeter or Fortune in most zones where it is recommended with these varieties.

Victory is a late plump seeded variety which may yield well where rust is not a factor. It has slightly weak straw of good length, is susceptible to smuts and rusts.

VARIETIES RECOMMENDED FOR SPECIAL PURPOSES

Larain-Valor. These oats are very early maturing in comparison with Exeter. Because of their earliness and large seed they are useful as a cleaning crop for wild oats. Both have resistance to lodging, but will not stand long after ripening. Both are susceptible to rusts. Valor is more resistant to smuts than Larain. In general Larain is higher yielding than Valor, although throughout Zone 2 and Zones 3G, 3D, and 4A, Valor has given yields equal to Larain. Both of these varieties yield much lower than Exeter.

Brighton is a high yielding, hullless variety with large kernels, is moderately resistant to smuts, but susceptible to rusts. It is useful for special purpose feeding such as young pigs, cattle and poultry.

VARIETIES RECOMMENDED FOR SPECIAL PURPOSES

O.A.C. 21 has been the standard malting barley in the past, but is being replaced by the variety Montcalm which is superior, particularly in yield and neck strength.

Warrior is a hooded (awnless) feed barley which may be useful where early maturity is required. It is susceptible to stem and leaf rust, but resistant to covered smut and most races of loose smut. It is satisfactory for straight combining.

LICENSED VARIETIES NOT RECOMMENDED

Newal, Olli, Prospect, Regal, Rex, Sanalta, Trebl.

NEW LICENSED VARIETIES UNDER TEST

Harlan.

FLAX

To control flax diseases it is advisable to treat the seed every year with a mercury fungicide at the rate of one and a half ounces per bushel. In addition, as most flax diseases over-winter on the straw, flax should not follow flax. All recommended varieties are susceptible to pasmo, but this disease so far has caused little damage in Saskatchewan.

Royal is moderately resistant to wilt and under some conditions is susceptible to rust. It has medium-sized, light brown seeds with a characteristic shading off toward very pale brown at the big end. Royal is a high yielder, is late maturing and has slightly weak straw. The oil content of Royal is reasonably high but its quality is lower than that of other recommended varieties.

Dakota is highly resistant to wilt. Although resistant to some races of rust it is susceptible to those prevailing at the present time. It has medium sized brown seeds. Dakota matures earlier and more uniformly than Royal, but is slightly lower in oil content.

Rocket is resistant to rust and moderately resistant to wilt. Compared with Royal it is slightly earlier, better in oil content and quality and has slightly larger brown seeds.

Victory is highly resistant to wilt and rust. It has white blossoms, large brown seeds and is high in oil content and quality. Compared with Royal it ripens slightly earlier and more uniformly.

Redwing is resistant to wilt and susceptible to rust. It has small brown seeds. Compared with Royal it is lower in yield but as it matures about a week earlier it is useful where early maturity is essential.

NEW LICENSED VARIETIES UNDER TEST

Redwood.

LICENSED VARIETIES NOT RECOMMENDED

Anthony, Banner, Beacon, Beaver, Cartier, Clinton, Eagle, Erban, Garry, Gopher, Laurel, Vanguard.

BARLEY

Barley usually gives more feed units per acre than either wheat or oats. It has generally given better results when sown early on summerfallow. This is particularly true on the dry open plains area. In the more moist parts of the eastern and northern zones, varieties of barley acceptable to the malting trade can be grown successfully for malting purposes.

Six-rowed Smooth Awned Varieties.

Montcalm is a blue seeded moderately weak strawed variety of high malting quality. It is susceptible to stem and leaf rust and to loose smut, but moderately resistant to covered smut. It is not suitable for straight combining. Montcalm is eligible for grade 1 C.W. six-row.

Titan is an early maturing, strong strawed feed barley. It is susceptible to stem and leaf rust, but is resistant to covered smut and most races of loose smut. It is suitable for straight combining.

Vantage is a medium late, strong strawed feed barley. It is resistant to stem rust but susceptible to leaf rust and both loose and covered smut. Vantage is suitable for straight combining.

Velvon 11 is a medium late, strong strawed feed barley. It is susceptible to both leaf and stem rust, but has resistance to most races of both covered and loose smut. It is suitable for straight combining.

Plush is a medium late feed barley with moderately strong straw. It is susceptible to stem and leaf rust and to loose and covered smut. It is not suitable for straight combining.

Two-rowed Varieties.

Hannchen is a rough awned, late maturing variety which has short weak straw, but is reasonably satisfactory for straight combining. It is susceptible to both stem and leaf rust, and to loose and covered smut. It is eligible for the top two row grades. In addition to the zones where Hannchen is recommended, it has a place in other localized areas because it produces fairly good yields of a high quality barley that is in good demand.

Compana is a smooth awned, early maturing feed barley. It has short weak straw, but is reasonably satisfactory for straight combining. It is particularly adapted to the drier areas of the province. It is susceptible to both stem and leaf rust and to loose and covered smut.

RYE

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

Dakold 23 is the most suitable variety of *fall rye* on account of its winter hardiness and high yield. The seed is small, wrinkled and mostly greenish in color.

Prolific is the most suitable variety of *spring rye* because of its high yield. The seed is large, fairly smooth and generally green in color.

FIELD PEAS AND BEANS

Special care is required in growing and harvesting these crops. Disease is an important factor and care should be taken to sow only disease free seed.

Peas

Dashaway is an early maturing, small yellow seeded, high yielding variety that is very suitable for the split pea trade. The vine is of medium length. As Dashaway does not shell readily it can be combine harvested.

Arthur is a medium large yellow pea which is acceptable for the split variety trade. It is high yielding, medium late maturing and has long vines. It can be combine harvested.

Guinevere is similar to Arthur but due to its larger seed is not as suitable for combining.

Early Blue is an early maturing, medium sized, high yielding blue seeded variety. It has white blossoms and a very short vine.

Beans

Great Northern is a medium-late maturing, large, white seeded variety of good yield and high quality. It is recommended especially as a market crop.

Norwegian is an early maturing, large, brown seeded variety. It is recommended for home use because of its earliness, good yield and high quality.

Norwhite is a new early maturing variety of excellent cooking quality. It resembles Norwegian excepting that the seeds are white.

	Thatcher		Exeter Fortune	Vantage	
3F.....	Thatcher		Exeter	Hannchen Montcalm Vantage	Dakota Rocket Victory
3G.....	Thatcher		Ajax Exeter Fortune	Vantage	Dakota Redwing
3H.....	Redman Thatcher		Fortune Victory	Montcalm* Velvon 11	Dakota Redwing
4A.....	Thatcher		Exeter	Montcalm* Vantage	Dakota Redwing Royal
4B.....	Thatcher		Exeter Fortune	Montcalm* Vantage Velvon 11	Dakota Redwing

† For sawfly control only.

△ Flax as a crop is not recommended in Zone 1C, and is hazardous to grow at many points in Zones 1A, 1B, and 2D, but for those who do grow flax, the recommended varieties are suggested.

* For malting purposes only.

PREVAILING SOIL AND CLIMATE OF THE CEREAL VARIETY ZONES

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| 1A—Brown soils; subject to frequent droughts. | 3B—Deep black and degraded black soils; shorter frost-free period and better moisture conditions than 3A. |
| 1B—Brown soils; subject to more frequent droughts than 1A. | 3C—Black soils; better moisture conditions than 2B, and cooler than 3A, 3C and 3G. |
| 1C—Brown soils, chiefly burn-out types; subject to more frequent droughts than 1A. | 3D—Deep black soils; better moisture conditions than 3E. |
| 2A—Dark brown soils; subject to occasional droughts; better moisture conditions than 1A. | 3E—Black soils; shorter frost-free season and better moisture conditions than 2D. |
| 2B—Dark brown soils; slightly cooler than 2A. | 3F—Degraded black and some grey soils; shorter frost-free period than 3D. |
| 2C—Dark brown soils, bench land; cooler, shorter frost-free season and better moisture conditions than 1A. | 3G—Black soils, medium to light textured, more droughty than 3E. |
| 2D—Dark brown soils; higher elevation and distinctly shorter frost-free season than 2B. | 3H—Degraded black soils; distinctly short-frost-free season. |
| 2E—Dark brown heavy clay soils; more drought resistance than 2A and 2B. | 4A—Grey and strongly degraded black soils; short frost-free season. |
| 2F—Brown and dark brown heavy clay soils; more drought resistance than 1A and adjoining 2B. | 4B—Grey soils; distinctly short frost-free season; better moisture conditions than 3E. |
| 3A—Black soils; better moisture conditions than 2A. | |

