

1948-51

THE VARIETIES ARE GIVEN IN ALPHABETICAL ORDER FOR EACH ZONE
(not including special purpose varieties)

| Zone | Prevailing Soil and Climate | Wheat | | | | Barley | Flax |
|------|--|-------------------------------|----------------------|---------------------------|--|----------------------------|------|
| | | Bread | Durum | Oats | | | |
| 1A | Brown soils; subject to frequent droughts | Rescue† Thatcher | Pelissier Stewart | Ajax Fortune | Titan | Royal ♦ | |
| 1B | Brown soils; subject to more frequent droughts than 1A | Rescue† Thatcher | | Ajax □ | Titan | Royal ♦ | |
| 1C | Brown soils; chiefly burn-out types; subject to more frequent droughts than 1A | Rescue† Thatcher | Pelissier Stewart | Ajax □ Fortune | Titan | Royal ♦ | |
| 2A | Dark brown soils; subject to occasional droughts; better moisture conditions than 1A | Thatcher | Stewart | | Plush Titan | Royal | |
| 2B | Dark brown soils; slightly cooler than 2A | Thatcher | Pelissier Stewart | Ajax Fortune | Plush Titan | Royal | |
| 2C | Dark brown soils, bench land; cooler, shorter frost free season and better moisture conditions than 1A | Rescue† Thatcher | | Ajax | Titan | Royal | |
| 2D | Dark brown soils; higher elevation and distinctly shorter frost free season than 2B | Rescue† Thatcher | | Ajax Exeter Fortune | Plush | Royal | |
| 2E | Dark brown heavy clay soils; more drought resistance than 2A and 2B | Apex Rescue† Thatcher | Stewart | Exeter Fortune | Plush Titan | Royal | |
| 2F | Brown and dark brown heavy clay soils; more drought resistance than 1A and adjoining 2B | Apex Rescue† Thatcher | | Ajax Victory | Titan | Royal | |
| 3A | Black soils; better moisture conditions than 2A | Redman Thatcher | Stewart | Exeter Fortune | Montcalm Plush Vantage | Dakota Royal | |
| 3B | Deep black and degraded black soils; shorter frost free period and better moisture conditions than 3A | Redman Rescue† Thatcher | | Exeter Fortune | Montcalm Plush Vantage | Dakota Redwing Royal | |
| 3C | Black soils; better moisture conditions than 2B, and cooler than 3A, 3C and 3G | Redman Rescue† Thatcher | Stewart | Exeter Fortune | Montcalm * Plush Vantage | Royal | |
| 3D | Deep black soils; better moisture conditions than 3E | Redman Thatcher | | Exeter Fortune | Hannchen Montcalm * Plush Vantage | Redwing Royal | |
| 3E | Black soils; shorter frost free season and better moisture conditions than 2D | Thatcher | | Ajax Exeter Fortune | Montcalm * Plush | Dakota Redwing | |
| 3F | Degraded black and some grey soils; shorter frost free period than 3D | Thatcher | | Exeter Fortune | Hannchen Montcalm Plush Vantage | Redwing | |
| 3G | Black soils; medium to light textured, more droughty than 3E | Thatcher | | Ajax Exeter Fortune | Plush | Redwing | |
| 3H | Degraded black soils; distinctly short frost free season | Redman | | Fortune Victory | Montcalm | Redwing | |
| 4A | Gray and strongly degraded black soils; short frost free season | Thatcher | | Exeter | Montcalm | Redwing Royal | |
| 4B | Gray soils; distinctly short frost free season; better moisture conditions than 3E | Thatcher | | Exeter Fortune | Montcalm | Dakota Redwing | |

†For sawfly control only.

*See the description of Montcalm in the text.

□ Oats as a crop are not recommended for this zone, but for those who do grow oats the variety Ajax is suggested.
♦ Flax as a crop is not recommended in Zone 1, and is hazardous to grow at many points in Zones 1A and 1B, but for those who do grow flax the variety Royal is suggested.

vision Department, University of Saskatchewan, Saskatoon, the Agricultural Stations of the University of Saskatchewan, and from your Agricultural

different zones which are general usage over the province. Although a local situation may vary widely from one zone to another, it will be found that one of the varieties will be satisfactory. Information on the cultivation of varieties can be obtained from the University of Saskatchewan, Dominion Experimental

very sensitive to depth of plowing; however, the depth of plowing should not be so deep as to dry the soil. The drier parts of Saskatchewan and barley should be planted in a moist, firm soil, even though it may be delayed to conditions. (5) The new varieties bid fair to revolutionize the succeeding crop in the succeeding crop in the most serious flax grower.

ely by newer varieties. that the reader keep up to date with the latest information as mentioned previously. It should be kept in mind that the best variety considered best in one situation may be the best under other circumstances in the same zone.

CEREAL CROPS

On the whole the recommendations given here apply particularly to 1948. Revised cereal variety recommendations are published annually. A copy of the recommendations may be obtained free of charge about January 15th each year

from the Extension Department, University of Saskatchewan, Saskatoon, the Dominion Experimental Stations of the Province, or from your Agricultural Representative.

CEREAL VARIETY ZONES

Among all the influences on cereal varieties, it has been found that the soil-climatic environment is of major importance. There are four main soil-climatic zones in Saskatchewan, namely, 1, 2, 3, and 4. To facilitate the making of specific variety recommendations, it has been necessary to divide the soil-climatic zones into cereal zones. The cereal zones are designated by the addition of a letter to the soil-climatic zone number.

Only those varieties are recommended

for use in the different zones which appear to warrant general usage over relatively large areas. Although a local soil-climatic condition may vary widely from the average for a zone, it will usually be found that one of the recommended varieties will be satisfactory for such a situation. Information on the local adaptation of varieties can always be obtained from the University or the nearest Dominion Experimental Station.

Special Considerations

The present trends in the small grain crops are toward:

- (1) more wheat and barley and less oats on the dry open plains, particularly in the South-west.
- (2) more barley, oats and flax and less wheat in the park belt and forest areas of the East and North.

The following points deserve special mention. (1) Wheat, barley, oats and rye require in general the same basic seeding rates when expressed in pounds per acre, whereas flax requires approximately a third as much. (2) Barley, rye

and flax are fairly sensitive to depth of seeding and should not be sown deeper than is necessary; however, the depth required may vary considerably with the soil type. (3) In the drier parts of Saskatchewan oats and barley should be sown early. (4) Flax should always be sown into warm, moist, firm soil, even though seeding has to be delayed to have the right conditions. (5) The new chemical weed killers bid fair to revolutionize flax production, as weeds in the flax crop and in the succeeding crop have for years been the most serious handicap to the flax grower.

VARIETY RECOMMENDATIONS

Following are the principal recommendations for 1948. For 1949 and 1950 there may be alterations in these recommendations according to changes which may occur in the varietal situation. Promising new varieties now under test may be added for certain zones and some of the older varieties may be no longer recommended for areas where they are

excelled definitely by newer varieties. It is suggested that the reader keep up to date by obtaining each year the latest recommendations as mentioned previously. It also should be kept in mind that the variety considered best in one situation may not be best under other circumstances in the same zone.

CEREAL CROPS

THE VARIETIES ARE GIVEN IN ALPHABETICAL ORDER FOR EACH ZONE
(not including special purpose varieties)

| Zone | Prevailing Soil and Climate | Wheat | | | | |
|------|--|------------------------------|----------------------|---------------------------|--|----------------|
| | | Bread | Durum | Oats | Barley | F |
| 1A | Brown soils; subject to frequent droughts | Rescue† Thatcher | Pelissier Stewart | Ajax Fortune | Titan | Roy |
| 1B | Brown soils; subject to more frequent droughts than 1A | Rescue† Thatcher | | Ajax□ | Titan | Roy |
| 1C | Brown soils, chiefly burn-out types; subject to more frequent droughts than 1A | Rescue† Thatcher | Pelissier Stewart | Ajax□ | Titan | Roy |
| 2A | Dark brown soils; subject to occasional droughts; better moisture conditions than 1A | Thatcher | Stewart | Ajax Exeter Fortune | Plush Titan | Roy |
| 2B | Dark brown soils; slightly cooler than 2A | Thatcher | Pelissier Stewart | Ajax Exeter Fortune | Plush Titan | Roy |
| 2C | Dark brown soils, bench land; cooler, shorter frost free season and better moisture conditions than 1A | Rescue† Thatcher | | Ajax | Titan | Roy |
| 2D | Dark brown soils; higher elevation and distinctly shorter frost free season than 2B | Rescue† Thatcher | | Ajax Exeter Fortune | Plush | Roy |
| 2E | Dark brown heavy clay soils; more drought resistance than 2A and 2B | Apex Regent Thatcher | Stewart | Exeter Fortune | Plush Titan | Roy |
| 2F | Brown and dark brown heavy clay soils; more drought resistance than 1A and adjoining 2B | Apex Rescue† Thatcher | | Ajax Victory | Titan | Roy |
| 3A | Black soils; better moisture conditions than 2A | Redman Thatcher | Stewart | Exeter Fortune | Montcalm Plush Vantage | Dakot Royal |
| 3B | Deep black and degraded black soils; shorter frost free period and better moisture conditions than 3A | Redman Regent Thatcher | | Exeter Fortune | Montcalm Plush Vantage | Dakot Royal |
| 3C | Black soils; better moisture conditions than 2B, and cooler than 3A, 3C and 3G | Redman Regent Thatcher | Stewart | Exeter Fortune | Montcalm * Plush Vantage | Royal |
| 3D | Deep black soils; better moisture conditions than 3E | Redman Thatcher | | Exeter Fortune | Hannchen Montcalm * Plush Vantage | Redw Royal |
| 3E | Black soils; shorter frost free season and better moisture conditions than 2D | Thatcher | | Ajax Exeter Fortune | Montcalm * Plush | Dakot Redw |
| 3F | Degraded black and some grey soils; shorter frost free period than 3D | Thatcher | | Exeter | Hannchen Montcalm Plush Vantage | Redw |
| 3G | Black soils, medium to light textured, more droughty than 3E | Thatcher | | Ajax Exeter Fortune | Plush | Redw |
| 3H | Degraded black soils; distinctly short frost free season | Redman | | Fortune Victory | Montcalm | Redw |
| 4A | Gray and strongly degraded black soils; short frost free season | Thatcher | | Exeter | Montcalm | Redw Royal |
| 4B | Gray soils; distinctly short frost free season; better moisture conditions than 3E | Thatcher | | Exeter Fortune | Montcalm | Dakot Redw |

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*See the description of Montcalm in the text.

□Oats as a crop are not recommended for this zone, but for those who do grow oats the variety Ajax is suggested.

◆Flax as a crop is not recommended in Zone 1, and is hazardous to grow at many points in Zones 1A and 2A but for those who do grow flax the variety Royal is suggested.

FLAX

To control flax diseases it is advisable to treat the seed every year with ceresan or a similar mercuric dust at the rate of 1½ ounces per bushel. In addi-

tion, as most of the diseases overwinter on the straw, flax should not follow flax.

Recommended Varieties

Royal is moderately resistant to wilt and rust, but is susceptible to pasmo. 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.

Redwing is resistant to wilt, susceptible to rust and pasmo and has small brown seeds. It is lower in yield than

Royal but as it matures a week earlier it is recommended where early maturity is essential.

Dakota is highly resistant to both wilt and rust and appears to be moderately susceptible to pasmo. It has medium-sized brown seed. Dakota matures earlier and more uniformly than Royal but is slightly lower in yield.

Varieties Not Recommended

Viking is a variety having white blossoms and very large yellow seeds.

Compared with Royal it is equally late and has much shorter straw. Viking is highly resistant to rust and wilt, but very susceptible to pasmo. It is high in oil extraction and quality.

Victory is a variety with white blossoms and large brown seeds. Compared with Royal it is equally late and has shorter straw. Victory is highly resistant to rust and wilt but susceptible to pas-

mo. It is high in percentage of oil and in oil quality.

Others: Crown, Cheyenne, Bison, Buda.

Promising Varieties Under Test

Rocket is a variety having blue blossoms and large brown seeds. Compared with Royal it is slightly earlier, slightly lower in yield and better in oil content and quality. It is resistant to rust and moderately resistant to wilt and pasmo.

RYE

Rye is a vigorous, high-yielding crop in most sections of the Province and is particularly useful on the lighter textured, droughty soils. Fall rye is valuable in the control of annual weeds and for the control of soil erosion.

Dakota 23 is the most suitable variety of fall rye on account of its winter

hardness 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.

Dashaway is an early maturing small seeded, good yielding yellow pea. The blossoms are white and the vine has medium length.

Arthur is a medium large yellow pea. It is high yielding and medium late maturing. The blossoms are white and the vine is fairly long.

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

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

Norwegian is a very early maturing large brown bean. It is recommended for home use because of its earliness, good yield and high quality.

Grasses and legumes suffer rigorous climatic conditions in Saskatchewan are few in number, although they are well adapted to winter hardness are the winter which are most essential.

Perennial crops are of little value in building up and increasing soil resources. Most perennials add fibre to the soil and a beneficial effect on soil structure in most cases assists in preventing soil erosion. Similia and water erosion. Similia not be obtained with annual legumes add nitrogen. The legumes add nitrogen and thus improve its fertility. Plants have shown that in trials when grown in rotation forage crops aid in the control of weeds which are otherwise difficult. Recommendations with rye. Recommendations for soil use of these crops for soil and weed control will be given in sections on Soils, Crops and Weed Control.

CHARACTERISTICS

Crop characteristics, such as root (whether creeping or fibrous), leafiness, varieties, etc., are factors which enter into the selection of a crop or mixture of crops. I summarize the main characteristics and suitability for different uses of the forage crops which are successfully grown in Saskatchewan.

Varieties

Crested Wheat Grass—leafier and finer stemmed than equal in yield it is two to three times shorter than Common. It ripens off or becomes more quickly than Common as a hay crop the taller Common makes it easier to handle.

Brome—Common or Parland, are recommended. Parland is more leafy and less winter hard than Brome. Alfalfa.—Ladak is more winter hard than yielding than Grimm at Athewan. In addition it is resistant to bacterial wilt. Outside the Grimm area it is recommended

Varieties Not Recommended

Mindum is the standard durum variety as regards macaroni quality, but it is being superseded in Saskatchewan by **Stewart**, which yields better.

Golden Ball. This variety is so poor

in macaroni quality that its license for sale as seed was revoked some years ago.

Carleton is a sister of **Stewart** but lower in yield.

WINTER WHEAT

While winter wheat is not recommended for general use in Saskatchewan, it is being grown more or less satisfactorily in Zone 1C and some parts of Zones 3B, 3H, 4A and 4B. The advantages of winter wheat, where it winters successfully, are that it excels spring wheat in yield and in getting ahead of late summer drought and early fall frosts. It is worth noting that breeding and testing work on this

crop is under way.

At the present time the varieties **Kharkov** and **Yogo** are being used. Both are hard, red winter wheats with awned heads and narrower longer kernels than **Thatcher**. They are susceptible to stem rust and moderately winter hardy. The variety **Yogo** is considered hardier than **Kharkov**.

OATS

On the dry open plains, where oats are often a disappointing crop, it is recommended that they be sown early

on summerfallow or other well prepared land. The recommended varieties all have open panicles and white seed.

Recommended Varieties

Exeter is a late maturing large seeded variety which yields well in the cooler, moister areas of Saskatchewan. It has slightly weak straw of good length. It is resistant to most races of stem rust but susceptible to some, and moderately susceptible to leaf rust and smuts.

Ajax is an early maturing variety with strong somewhat short straw. It is resistant to most races of stem rust, but susceptible to some, and has moderate resistance to leaf rust and smuts. It has a somewhat small kernel but has yielded well in the drier areas of the Province

and is useful in other areas where frost is a hazard.

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

Fortune is a new high yielding, smut resistant oat which possesses rust resistance similar to that of **Exeter**. This variety compared with **Exeter** is equal in yield, slightly earlier and stronger strawed.

Varieties Recommended for Special Purposes

Valor is a very early maturing variety with large plump kernels and strong straw. Because of its earliness and large seed it is useful as a cleaning crop for wild oats. It is susceptible to rusts, but resistant to smuts.

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 Not Recommended

Banner resembles **Victory** closely in adaptability, lateness, yielding ability, length and strength of straw and susceptibility to disease. **Banner** has a somewhat more slender kernel and is better adapted to dry conditions than **Victory**.

Legacy. Compared with **Victory Legacy** is earlier and has stronger straw but has not yielded as well under Saskatchewan conditions.

Laurel is a high yielding hullless variety with strong, short straw. It is a week earlier than **Banner** and yields about two-thirds as much threshed grain. **Laurel** is useful for special feeding purposes as for poultry and pigs.

Garry is a new variety, resistant to the rusts and smut. It has not yielded as well as **Ajax** or **Exeter** in Saskatchewan. **Garry** is strong strawed, later in maturity than **Ajax** but earlier than **Exeter**. It is susceptible to *Helminthosporium victoriae*, a serious root rotting disease.

Others: **Anthony, Beacon, Beaver, Cartier, Eagle, Erban, Gopher, Vanguard.**

Promising Varieties Under Test

Larain is an early maturing, strong-strawed variety with plump kernels. It may prove useful as a special purpose oat in certain parts of Saskatchewan.

Barley is now being grown on the open plains where conditions, it gives more acre than either wheat, recommended that barley

Plush is a six-rowed, medium late, high yielding, moderately strong strawed, ly resistant to stem rust to leaf rust, loose and c is reasonably satisfactory and is eligible for feed

Montcalm is a six-awned blue seeded variety ing quality. It has m straw and is poor for c calm is eligible for gra row. It is susceptible to smuts, but moderately r ered smut.

Titan is a six-rowed early maturing, strong

O.A.C. 21 has been the ing barley in the past largely replaced by **Montcalm** for omic reasons. **O.A.C. 21** rough-awned blue seed a weak neck and prone **Warrior** is the best a

Newal is a six-rowed strongly nodding variety **Plush**, **Newal** is equal in ability, time of maturity and strength, bushel weight to diseases. **Newal** in the northwest where **Newal** in the southeast.

Regal is a six-rowed variety which, compared lower in yield, a day late straw of equal length susceptible to rusts but to smuts. **Regal** continues in the northwest.

Prospect is a six-awned early maturing variety compared with **Plush**, **Prospect** lower in yield and bush in straw length and strength in disease reactions. **Prospect** in the southwest, excels most years.

Rex is a two-rowed variety. Compared with **Plush**, **Rex** lower in yield, earlier maturity and straw length in disease reactions, distinct bushel weight and much strength and in resistance