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Varieties of Cereal and Oilseeds Crops for Alberta - 1986

Prepared by the Cereal and Oilseed Advisory Committee of the Alberta Agriculture Co-ordinating Committee

Explanatory

This publication provides information on individual varieties and indicates cereal and oilseed production areas within the province. Important agronomic characteristics are given in tabular form for varieties of wheat, oats, barley, flax, canola, and rye. The production areas, based primarily upon precipitation and length of growing season, are indicated on the map. With this information farmers can choose varieties that may be best suited to their own particular farming programs. The varieties are tested under medium management conditions and may change their response if tested under very high or very low management.

Yields

The tables show relative yields for six production areas. In area 1, irrigated yields expressed as a per cent of dryland yields are: C.W. Wheat 185, barley 160, oats 180, flax 210, canola 125. In area 2, irrigated yields expressed as a per cent of dryland yields are: C.W. wheat 130, barley 125, oats 120, flax 145, canola 120.

Maturity

The relative classifications refer specifically to the crop being considered. For example, an early-maturing wheat variety could require more days to reach maturity than a late-maturing variety of barley.

In areas 2, 3, and 5 of Alberta the following may be used as a guide for estimating maturity in actual days from seeding to harvest when the crops are seeded on fallow land: Neepawa wheat - 120 days, Park - 116, Grizzly oats - 114, Random - 107, Galt barley - 105, Otal - 94, McGregor flax - 130, Noralta - 117, Westar canola - 112, and Tobin - 95 days. In area 6 the longer daylight hours usually reduce the number of days to maturity required. Area 4 has the longest requirement in the province for days to maturity. In southern Alberta, Neepawa can be expected to mature in 100 to 105 days and other crops are similarly earlier maturing. The comparisons among varieties within crops, however, tend to remain fairly uniform regardless of where the crops are grown.

Disease, seed treatment

- Seed of rye and flax should be treated to control seedling blight and seed of canola to control flea beetles, seedling blight and the seedborne phase of black leg.
- Cereal smuts can be controlled with systemic seed treatment fungicides. See Alberta Agriculture publication *Seed Treatment of Cereal and Oilseed Crops* Agdex 100/632.
- Treated seed must not be fed to livestock or poultry or sold for feed. Refer to label for maximum period for storing treated seed. Storage



periods for fungicide-insecticide combination products are fairly short. Small quantities of excess seed can be buried or burned. Do not expose treated seed to wildlife!

Good seed

- In relation to total farm input expenses, the cost of GOOD SEED, a most important production factor, is very small.
- The only way to be absolutely sure of obtaining a particular variety is by the use of PEDIGREED SEED.
- Pedigreed seed may be purchased in bulk from authorized suppliers.

The Alberta Cereal and Oilseed Advisory Committee coordinates the findings of the various research institutions in Alberta and in this publication describes those varieties that are suited for production in Alberta. The committee is comprised of representatives from the University of Alberta, Agriculture Canada, Canadian Seed Growers Association, Canadian Seed Trade Association and Alberta Agriculture.

For more detailed information consult your district agriculturist.

COMPARISON OF VARIETIES

Symbols used in Tables: * Variety may not be described in 1987
 — Denotes variety not generally suited to area

| WHEAT | | | | | | | | | | | | | | |
|--|------|----------------|-----|-----|-----|--|-----|----------------|-------------------|---------|------------|------------|------|-----------------|
| Variety | Irr. | Area (See Map) | | | | | | Resistance to: | | | | | | |
| | | 1&2 | 1 | 2 | 3 | 4 | 5 | 6 | Relative Maturity | Lodging | Shattering | Loose Smut | Bunt | Common Root Rot |
| Yield as % of Neepawa | | | | | | ELIGIBLE FOR C.W. RED SPRING WHEAT GRADES | | | | | | | | |
| Columbus | 90 | 94 | 100 | 98 | 99 | 103 | 96 | Med-late | Good | Good | Fair | Fair | Fair | |
| Katepwa | 100 | 102 | 100 | 100 | 98 | 103 | 95 | Medium | Good | Good | Good | Fair | Fair | |
| Leader | 88 | 94 | 91 | 101 | — | — | — | Med-late | Good | Good | Fair | Fair | Poor | |
| Neepawa | 100 | 100 | 100 | 100 | 100 | 100 | 100 | Medium | Good | Good | Good | Fair | Fair | |
| Park | — | — | 87 | 88 | 90 | 100 | 89 | Med-early | Good | Good | Good | Fair | Fair | |
| REMARKS: LEADER - recommended for sawfly areas only. COLUMBUS - late maturing in Areas 3, 4, 5 and 6. NEEPAWA - widely adapted. PARK - easier to thresh than Neepawa, subject to head discoloration with yield loss. C.W. Red Spring Wheat grown under irrigation tends to have lower grades. COLUMBUS and LEADER have sprouting resistance. KATEPWA - easier to thresh than Neepawa. KENYON and LANCER - no seed available in 1986. LANCER is sawfly resistant. | | | | | | | | | | | | | | |
| ELIGIBLE FOR CANADA PRAIRIE SPRING WHEAT GRADES | | | | | | | | | | | | | | |
| HY320 | 146 | 116 | 128 | 134 | 127 | — | — | V-Late | Excel. | Good | Poor | Poor | Poor | |
| REMARKS: HY320 is a semi-dwarf variety, requiring a systemic fungicide seed treatment. | | | | | | | | | | | | | | |
| Yield as % of Wakooma | | | | | | ELIGIBLE FOR C.W. AMBER DURUM WHEAT GRADES | | | | | | | | |
| Arcola | 104 | 95 | 94 | 99 | — | — | — | Medium | Good | Good | Fair | Good | Poor | |
| Coulter | 106 | 93 | 96 | 100 | — | — | — | Medium | Good | Good | Fair | Good | Fair | |
| Kyle | 101 | 86 | 103 | 105 | — | — | — | Med-Late | Fair | Good | Fair | Good | Fair | |
| Medora | 105 | 98 | 97 | 102 | — | — | — | Med-Late | V. Good | Good | Fair | Good | Fair | |
| Wakooma | 100 | 100 | 100 | 100 | — | — | — | Med-Late | Good | Good | Fair | Good | Fair | |
| REMARKS: KYLE, MEDORA, WAKOOMA - should be grown only in Area 1 and 2 and the southeastern portion of Area 3 because of late maturity. COULTER, MEDORA and WAKOOMA have superior quality for export. WAKOOMA yields about 9% more than Neepawa in areas of adaptation. KYLE - seed supplies limited in 1986. SCEPTRE - no seed available in 1986. | | | | | | | | | | | | | | |
| Yield as % of Norstar | | | | | | ELIGIBLE FOR ALBERTA RED WINTER WHEAT GRADES | | | | | | | | |
| Norstar | — | 100 | xx | xx | — | — | — | Early | Fair | Good | Poor | Poor | Fair | |
| Sundance* | — | 98 | — | — | — | — | — | Early | Poor | Good | Poor | Fair | Fair | |
| REMARKS: Varieties listed in descending order of winter hardiness. Winter survival is best in southwestern Alberta. XX - no data available, should only be sown into standing stubble. | | | | | | | | | | | | | | |

BARLEY

| Variety | Irr. 1&2 | Area (See Map) Yield % as of Galt | | | | | | Relative Maturity | No. of Rows | Awn Type | Resistance to: | | | | Com- mon Root Rot |
|--------------------------------------|-------------|--------------------------------------|-----|-----|-----|-----|-----|----------------------|-------------------|-------------|----------------|-----------------|---------------|-------------------------------------|----------------------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | | | | Lodg- ing | Shatter- ing | Loose Smut | False Loose & Covered Smut | |
| ELIGIBLE FOR FEED GRAINS ONLY | | | | | | | | | | | | | | | |
| Abee | 90 | 100 | 97 | 97 | 101 | 102 | 101 | Med-late | 2 | Rough | Good | Good | Poor | Fair | Fair |
| Diamond | 99 | 98 | 104 | 106 | 108 | 107 | 97 | Medium | 6 | Semi-smooth | Good | Fair | Poor | Good | Poor |
| Empress | 91 | 85 | 97 | 101 | 109 | 106 | 98 | Medium | 6 | Rough | Good | Good | Poor | Poor | Fair |
| Galt | 100 | 100 | 100 | 100 | 100 | 100 | 100 | Medium | 6 | Semi-smooth | Good | Fair | Poor | Good | Poor |
| Heartland | 99 | 99 | 109 | 108 | 112 | 107 | 103 | Medium | 6 | Smooth | Good | Fair | Poor | Fair | Fair |
| Jackson | — | — | — | — | 93 | 96 | 95 | Early | 6 | Rough | Good | Fair | Poor | Poor | Poor |
| Johnston | 93 | 102 | 117 | 112 | 113 | 117 | 112 | Late | 6 | Smooth | Poor | Fair | Fair | Poor | Fair |
| Klondike | 95 | 93 | 98 | 103 | 106 | 103 | 94 | Medium | 6 | Smooth | Good | Fair | Fair | Fair | Fair |
| Leduc | 98 | 101 | 104 | 106 | 113 | 104 | 92 | Medium | 6 | Rough | Fair | Fair | Fair | Good | Fair |
| Otal | — | — | — | — | 91 | 94 | 85 | Early | 6 | Rough | Poor | Fair | Poor | Fair | Poor |
| Samson | 95 | 82 | 92 | 99 | 99 | 93 | 92 | Late | 6 | Rough | Excel. | Fair | Poor | Fair | Fair |
| Scout | 78 | 77 | 84 | 78 | 84 | 82 | 85 | Medium | 2 | Rough | Fair | Fair | Poor | Poor | Fair |
| Tupper | 81 | 75 | 91 | 85 | 82 | 86 | 89 | Medium | 6 | Rough | Good | Fair | Good | Poor | Fair |
| ELIGIBLE FOR C.W. GRADES | | | | | | | | | | | | | | | |
| Argyle | 93 | 92 | 100 | 100 | 105 | 102 | 98 | Medium | 6 | Smooth | Good | Fair | Good | Poor | Fair |
| Betzes* | 81 | 88 | 91 | 91 | 88 | 92 | 92 | Medium | 2 | Rough | Fair | Good | Poor | Poor | Fair |
| Bonanza | 92 | 86 | 98 | 99 | 101 | 92 | 91 | Medium | 6 | Smooth | Good | Fair | Fair | Poor | Fair |
| Conquest | 88 | 80 | 86 | 91 | 92 | 87 | 80 | Medium | 6 | Smooth | Good | Fair | Fair | Fair | Fair |
| Harrington | 92 | 95 | 96 | 91 | 102 | 100 | 96 | Medium | 2 | Rough | Good | Fair | Poor | Poor | Fair |
| Klages | 83 | 85 | 94 | 92 | 93 | 98 | 104 | Late | 2 | Rough | Good | Fair | Poor | Good | Fair |

REMARKS: Smuts can be controlled with systemic seed treatment fungicides. SCOUT and TUPPER - hullless, low in fibre. DIAMOND, EMPRESS, JOHNSTON and LEDUC have superior scald resistance. HEARTLAND, JACKSON, SAMSON and TUPPER - seed supplies limited in 1986. SAMSON - a semi-dwarf, requires a high level of management. Under optimum fertility, weed control, and moisture, Samson can yield up to 50 per cent more than Galt.

OATS

| Variety | Irr. 1&2 | Area (See Map) Yield as % of Harmon | | | | | | Relative Maturity | Resistance to: | | | | Remarks |
|-----------|-------------|--|-----|-----|-----|-----|-----|----------------------|----------------|-----------------|-------|---------------------------------|---------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | | Lodg- ing | Shatter- ing | Smuts | | |
| Athabasca | 91 | 88 | 92 | 97 | 97 | 102 | 92 | Early | Good | Fair | Poor | Plump kernels | |
| Calibre | 112 | 121 | 117 | 111 | 113 | 110 | 118 | Late | Good | Good | Poor | Thin hull | |
| Cascade | 104 | 111 | 105 | 110 | 120 | 120 | 120 | Med-late | Good | Good | Poor | Kernels similar to Random | |
| Dumont | 106 | 122 | 112 | 111 | 111 | 115 | 113 | V-Late | Fair | Good | Good | Excellent disease resistance | |
| Foothill | 97 | 103 | 100 | 104 | 98 | 105 | 105 | Late | Good | Good | Poor | Forage variety | |
| Grizzly | 102 | 94 | 104 | 99 | 110 | 113 | 106 | Late | Fair | Good | Poor | Plump kernels | |
| Harmon | 100 | 100 | 100 | 100 | 100 | 100 | 100 | Med-late | Good | Good | Fair | Plump kernels, dehulls readily | |
| Random | 101 | 106 | 105 | 94 | 102 | 109 | 105 | Med-early | Good | Good | Poor | Short straw, long large kernels | |

NOTE: JASPER - No seed available in 1986.

OTHER CEREAL CROPS

SPRING RYE - GAZELLE - only available spring variety and has maturity similar to Neepawa wheat.
 SOFT WHITE SPRING WHEAT - FIELDER and OWENS - only recommended varieties. OWENS should only be grown in areas where stripe rust may be a problem.
 OTHER WHEATS - GLENLEA* - is a late maturing variety eligible for Utility Wheat Grades only and yields about 5% above Neepawa.
 PITIC 62* - is a very late maturing variety with yields variable depending on the season. It is eligible for Canada Feed Grade only. Pitic 62 yields well under Irrigation.
 TRITICALE - CARMAN, TRIWELL and WELSH - spring varieties - yield 5 to 10% higher than Neepawa and are later in maturity.

FALL RYE

Area (See Map)
Yield as % of Kodlak in areas

| Variety | Irr. 1&2 | 1 | 2 | 3 | 4 | 5 | 6 | Relative Maturity | Test Weight | Seed Size | Straw Strength | Stem Smut |
|-----------|-------------|-----|----|----|-----|-----|-----|----------------------|----------------|--------------|-------------------|--------------|
| Musketeer | — | 122 | XX | XX | 106 | 103 | XX | Early | Good | Large | Good | Good |
| Cougar | — | 98 | XX | XX | 90 | 98 | 99 | Late | Good | Small | Good | Poor |
| Kodiak | — | 100 | XX | XX | 100 | 100 | 100 | Late | Poor | Large | Fair | Good |

REMARKS: COUGAR - has shortest straw, susceptible to seedling blight - use of treated seed can improve yields. Stem smut - use systemic fungicides in high risk areas on all varieties. Varieties listed in descending order of winter hardiness. PRIMA - no seed available in 1986. XX - No data available.

FLAX

Area (See Map)
Yield as % of Noralta in areas

| Variety | Irr. 1&2 | 1 | 2 | 3 | 4 | 5 | 6 | Relative Maturity | Seed Size | Rust Resistance |
|----------|-------------|-----|-----|-----|-----|-----|-----|----------------------|--------------|--------------------|
| Dufferin | 104 | 105 | 105 | 99 | 90 | — | — | Late | Medium | Good |
| McGregor | 111 | 106 | 118 | 105 | 98 | — | — | Late | Medium | Good |
| Noralta | 100 | 100 | 100 | 100 | 100 | 100 | 100 | Early | Small | Poor |
| NorLin | 112 | 100 | 119 | 112 | 108 | 95 | 100 | Medium | Medium | Good |
| NorMan | 113 | 112 | 99 | 102 | 108 | — | — | Late | Medium | Good |

REMARKS: NORMAN - seed supplies limited in 1986.

CANOLA

Area (See Map)
Yield as % of Tobin in areas

| Variety | Irr. 1&2 | 1 | 2 | 3 | 4 | 5 | 6 | Relative Maturity | Straw Length | Remarks |
|---|-------------|-----|-----|-----|-----|-----|-----|----------------------|-----------------|---------------------------------|
| POLISH TYPE (<i>B. campestris</i>) | | | | | | | | | | |
| Tobin | 100 | 100 | 100 | 100 | 100 | 100 | 100 | Early | Medium | Mixed yellow and brown seed |
| ARGENTINE TYPE (<i>B. napus</i>) | | | | | | | | | | |
| Pivot | 125 | — | — | — | — | — | — | Late | Long | |
| Triton* | 80 | XX | 75 | 90 | 80 | 100 | 80 | Late | Long | Triazine resistant, low quality |
| Westar | 120 | 85 | 110 | 120 | 110 | 145 | 120 | Med-late | Long | |

REMARKS: Polish type 2-3 weeks earlier than Argentine type. Argentine type shatter more readily than Polish when ripe, require early seeding in Areas 4,5 and 6. Argentine canola is very risky in Areas 5 and 6 because of late maturity. Mixtures of canola and mustard are inseparable and unacceptable. All canola cultivars are low in erucic acid and glucosinolates. XX - No data available.