



B.C. GRAIN  
PRODUCERS  
ASSOCIATION

2003  
FIELD CROP  
VARIETY PERFORMANCE  

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B.C. PEACE RIVER REGION



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**PEACE RIVER AGRICULTURE  
DEVELOPMENT FUND**



**Investment  
Agriculture  
Foundation**  
of British Columbia

# BC Grain Producers Association

## 2003 Field Crop Variety Performance

### BC Peace River Region

#### Introduction, Acknowledgements, and Cautionary Notes

This report summarizes the *Field Crop Variety Performance Trials* that were conducted by the *Research Committee* of the *BC Grain Producers Association*, and is the result of funding and partnering with the following organizations:

*Investment Agriculture Foundation of BC*  
*BC Peace River Grain Industry Development Council*  
*Peace River Agricultural Development Fund*

*AGRICORE UNITED* and *LOUIS DREYFUS* should also be recognized for their contribution via protein analysis, *PEACE TRACTOR* for their help with our machinery needs, as well as other help offered from the *BC Ministry of Agriculture, Food and Fisheries*. We should all thank these organizations for their financial support and/or input in making our field-testing and the production of this book possible. A special thanks is also extended to the two cooperators who have generously given their support to the variety and agronomic testing program. In 2003, the cooperators were once again *Dennis Meier, Dawson Creek*, and *Cameron Fines, Fort St. John*.

Further thanks goes out to the field and lab team who helped make this another successful year. They are Research Assistant *Janice Dagasso*, and Field Technicians *Alan Mittelstadt* and *Lana Miller*. Final thanks goes to *Colleen Giesbrecht* for all her help in the preparation of this report.

This document reports all registered materials grown during the 2003-growing season from regional trials placed at both the Dawson Creek and Fort St. John research farms. Historical data is included wherever available. However, where results are derived only from 2003 data, readers of this report must **interpret and use such one-year data with considerable caution**, particularly when viewing the scatter-point graphs on yield and maturity. A variety more often than not changes position on the graph after additional results are obtained simply as the result of variable weather patterns averaged over time. The more station years used to produce an average, the more stable the result.

This book is produced without bias and is reported to the best of our ability from data collected. It should only be used as a guide, and where labels are available with your product, always follow label directions.

#### For More Information Contact:

**Clair F. Langlois** Research Manager  
 BC Grain Producers Association  
 400 - 116<sup>th</sup> Avenue, Dawson Creek, BC V1G-3E2  
 Tel: (250) 782-2557 FAX: (250) 784-2299

**Maurice Fines** Chair - Research Committee  
 BC Grain Producers Association  
 P.O. Box 6004, Fort St. John, BC V1J 4H6  
 Tel/FAX: (250) 785-4124

**Kerry Clark**, P.Ag. Crop Protection Specialist  
 BC Ministry of Agriculture, Food and Fisheries, Fort St. John  
 Tel: (250) 787-3240 or 1-888-822-1345 FAX: (250) 787-3299

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## BC Grain Producers Association Reference & Terminology

### Station Years

The number of station years that the variety has been tested can be seen in the Yield tables inside the square brackets [ ]. A station year is one test site at one location in one year. For example, a canola trial conducted at two locations over three years would be six station years. We advise using caution if the data is based on *less than six station years in total*, or three years at any given location. This, of course, is a concern for canola where often a line does not even stay in the market for more than 3 years.

### Interpreting Yield Results

Crops in this book are managed using the same level of inputs as field sized recommendations would suggest. Yields here are the result of *small plot production*, and the same *level* of production is unlikely to be achieved on a large-scale basis. In contrast to research plots where consistency can be better controlled, wet areas and variable soil fertility affect field scale crop production. As well, small plots are subject to *edge effect*. Edge effect is caused by the spaces around the individual plots allowing extra sunlight to penetrate, boosting yields on these exposed outer plants, as compared to the average plant in a field scale situation that would be shadowed by its neighbors. **The important concept is that these effects are equal for all small plots in a given trial, and we can, therefore, compare varieties in each trial and look at resulting yields relative to one another.** Unfortunately statistics, which are vital, cannot be used on "*percent of check variety*". Thus, we elected to show *bushels per acre* wherever possible for the sole purpose of displaying statistical results. Treat *all* yields, (*percent of check* and *bushels per acre*), as relative results. Agronomic information for the check variety has been bolded in all the tables.

### Plant Breeders Rights

The Plant Breeders' Rights (PBR) gives plant breeders' "copyright" protection of a new variety for up to 18 years. Once a variety has been granted PBR, the breeder has control over the multiplication and sale of the seed. The breeder can take legal action for damages if someone infringes on their rights. Farmers may save some seed for seeding the next year on their own farm. Sale of the crop, as seed for planting purposes is not allowed. Many new transgenic herbicide tolerant varieties have additional restrictions through '*technical use agreements*'. Varieties protected by PBR can be identified by their PBR logo on a seed bag, seed tag or advertising material. This book tries to identify such PBR lines within "*Variety Description*" tables as square boxes. Ultimately, it is the responsibility of the grower to know which line is PBR.

### Certified Seed

The cost of *certified seed* is a small additional expense in relation to total crop production input costs, especially when changing to a different variety. Certified seed assures genetic purity, high germination rates and low percentage of other crop and weed seeds when compared to common seed. Certified seed can be purchased in bulk from authorized establishments (see page 41).

### Seed Treatment

Choosing disease-resistant varieties and using certified, plump, treated seed goes a long way in the fight against plant disease. The cost of a fungicide or a combined fungicide/insecticide seed treatment is a small price to pay for the amount of protection they can provide. Treated seed must not contaminate grain delivered to an elevator or be used for feed.

- ◆ Cereal seed should be treated to control *true loose smut*.
- ◆ Seed of rye, winter wheat, and flax should be treated to control *seedling blight*. Winter wheat and rye also require protection against *smut*.
- ◆ Canola seed should be treated to control seed borne *blackleg*, *damping off*, and early *flea beetle* attack.

### Ergot

The fungal disease Ergot can attack the grain of all varieties of wheat, barley, rye, triticale, and most common species of grass. Oat varieties are rarely attacked. Grain having 0.1% ergot is considered poisonous to livestock and should not be used as feed.

### Seed Inoculation

Peas can make much of their nitrogen (N) requirement from the air through a partnership with soil bacteria called *Rhizobium*. The pea seed must be inoculated immediately before or during seeding with a proper strain of bacteria specific to peas. Granular formulations placed with the seed, have had good results in Peace soils. *Rhizobiums* are living organisms so check expiry date on the package and follow inoculant label directions carefully. High soil nitrogen levels (over 60 kg N/ha) will reduce nodulation in the field. Cool, dry, or excessively wet soils, provide a harsh environment for proper inoculation and under these conditions, a low level of nodulation formation will be seen. Granular inoculant placed with the seed was used on all pea trials seen here.

### Seeding Rates

While the following *range* of seeding rates has given equal yields for each crop in trials, experience has shown that the top end of the range provides more consistent results. Risk can be reduced under conditions of stress that impair emergence by increasing seeding rates. In addition, higher seeding rates can reduce the amount of secondary tillering, produce earlier and more uniform maturity, and reduce the amount of green kernels.

For example, tests conducted by the Beaverlodge Research Station several years ago throughout the Peace showed that by increasing the seeding rate of wheat from 80 to 120 lbs/ac (90 to 134 kg/ha), that the time to maturity was reduced by two days.

**BC Grain Producers Association  
2003 Growing Conditions**

| <b>Suggested Rates of Seeding</b> |                 |                 |
|-----------------------------------|-----------------|-----------------|
| Wheat                             | 90 - 120 lb/ac  | 100 - 135 kg/ha |
| CPS Wheat                         | 130 - 180 lb/ac | 145 - 200 kg/ha |
| Barley                            | 75 - 100 lb/ac  | 85 - 110 kg/ha  |
| Oats                              | 70 - 90 lb/ac   | 85 - 100 kg/ha  |
| Flax                              | 26 - 40 lb/ac   | 30 - 35 kg/ha   |
| Rye                               | 65 - 85 lb/ac   | 73 - 95 kg/ha   |
| Peas                              | 150 - 300 lb/ac | 165 - 330 kg/ha |
| Argentine Canola                  | 5 - 8 lb/ac     | 6 - 9 kg/ha     |
| Polish Canola                     | 5.5 lb/ac       | 6 kg/ha         |

Due to large differences in seed size with a crop like peas, seeding rates can vary considerably. A preferred way of dealing with seeding rate is to base it on a *target number of viable seeds per square foot*. Using the 1000 kernel weights, adjusting for percent germination, and allowing for seed decay (3%), calculate the number of pounds of seed required per acre.

| Crop          | Type     | Seeds / sq.ft | 1000 K wt   |
|---------------|----------|---------------|-------------|
| Wheat         | CWRS     | 24 - 25       | 35 - 44 g   |
|               | CPS/CWES | 24 - 25       | 44 - 52 g   |
| Barley        | 6 Row    | 24 - 25       | 35 - 43 g   |
|               | 2 Row    | 24 - 25       | 44 - 53 g   |
| Oats (Hulled) |          | 24 - 25       | 38 - 47 g   |
| Rye           |          | 24            | 30 - 35 g   |
| Peas          |          | 8             | 200 - 345 g |

**Example**

Target **8** pea plants per square foot, the variety has a 1000 K wt. of **250** grams, and you estimate that between seed decay and percent germination of the seed lot that you will have **90%** of the seeds grow into healthy plants.

$$\frac{8 \text{ plants/sq.ft} \times 250 \text{ (g/1000 K)}}{90 \text{ ( \% )}} \times 10 = 222 \text{ lb/acre}$$

You would plant 222 lbs. of pea seed/acre.

The spring of 2003 was delayed in the BC Peace River region by about one and a half weeks due to winter conditions refusing to abate. Once crops were planted, rainfall seemed to turn off for the South Peace region, but continued at optimum intervals for the North Peace, starting around early July. The difference in overall rainfall over the growing season between the North and South Peace regions was only about 35 mm, but most of those 35 mm fell in the North Peace during the month of July during several intense storms. This made all the difference for the North Peace, as the South Peace continued to suffer from a "surface drought" situation for most of the remaining growing season.

The majority of crops at the South Peace farm still managed to produce decent yields come harvest time, which was a fairly open one in 2003. Wheat, though, was hard hit at the site, producing lower than average yields. Canola at the same site also suffered lower than normal yields, but not as badly as the wheat. In sharp contrast, crops grown at the North Peace farm did exceptionally well in 2003, breaking records on site for both yield and seed plumpness, however they took longer to mature than those at the South Peace farm.

Wireworms hit the South Peace farm hard in 2003 adding to the crop stress there. The root attacks damaged wheat the worst, but all cereals struggled to overcome these pests during the 2 - 4 leaf stage that lasted abnormally long in 2003. Even the canola plots at Dawson Creek had their growth stagnated during the 2 - 6 true leaf period as they also struggled to replace damaged roots while at the same time contend with a lack of soil moisture.

To summarize, 2003 was an acceptable year for the South Peace research farm, and an exceptional year for the North Peace research farm.

Refer to the back of this report for a total weather report via graphs (pages 36-42).

## Interpreting Data

The yield for each variety is reported on a regional basis for the Dawson Creek and Fort St. John areas as well as an average for the entire BC Peace. Also, the number of years each variety has been tested is given for each of the two regions. In the following examples, the number of years is indicated in [ ] right after the yield. "Station years" are the total number of times a variety has been tested in these trials.

| Six Row Barley |      | Yield as % of Harrington |                |          |               |                |          |            |                |          |
|----------------|------|--------------------------|----------------|----------|---------------|----------------|----------|------------|----------------|----------|
| Variety        | Type | Dawson Creek             |                |          | Fort St. John |                |          | B.C. Peace |                |          |
|                |      | 2001 Yield               | 1993-2001 Avg. | Stn.Yrs. | 2001 Yield    | 1993-2001 Avg. | Stn.Yrs. | 2001 Yield | 1993-2001 Avg. | Stn.Yrs. |
| AC HARPER      | feed | 113                      |                | [3]      | 125           | 105            | [5]      | 125        | 109            | [8]      |

Number of **years** the variety was tested at **each station**

Number of **times** in total the variety was tested in the **BC Peace**.

**Statistical Values** Entries into the Regional trials are replicated (or repeated) four times (three times minimum) at both locations. Replication is used to derive an overall average per entry per trial, and allow for statistical analysis.

**Coefficient of Variance (CV value)**, given as a percentage, it tells us how statistically sound or reliable a given data set is. Generally, any value less than or equal to 15% is considered to be acceptable and indicates "sound" data. This means if you were to repeat the trial under similar conditions, you would get similar results, or at least we are 95% confident that we would. We tend to be a little more lenient on this 15% for such things as disease or insect data, as these are normally highly variable due the nature of the beast, but we do not like to see yield data from a single trial with a high CV value. Anything less than 10% is considered excellent.

**Least Significant Difference test (LSD value)**, are those little letters behind the *data means*. Basically, if two or more *data means* (or averages) have the same letter behind their number, they are NOT significantly different from one another according to statistics. Therefore, means or averages with the same letter should not be viewed as one being "superior" or "inferior" from the other or others of the same letter. LSD takes variability into account, and compares "apples" to "apples".

Example:

| Variety       | Dawson Creek |                |          |
|---------------|--------------|----------------|----------|
|               | 2001 Yield   | 1993-2001 Avg. | Stn.Yrs. |
| Super X       | 105 ab       | 102            | [3]      |
| Superdooper Y | 107 a        | 105            | [3]      |
| So-So 101     | 100 b        | 98             | [2]      |
| Old Goody     | 95 c         | 97             | [6]      |

← In this example, some people might think variety "Superdooper Y" is superior to variety "Super X" and "So-So 101". This is not true according to statistics, "Superdooper Y" is superior to variety "So-So 101", but is equivalent to "Super X" in yield because both "Superdooper" and "Super X" have the letters "a" with them. In this example, "Super X" is not superior (or significantly different), from variety "So-So 101" either, as both have a "b" behind their means. Also, "Superdooper Y", "Super X", and "So-So 101" are superior to, (or a better term is significantly different from), "Old Goody". Note, in this report, we only have LSD values for this current year's data, and thus you should still take notice of the long term averages.

**For any varieties with less than three station years of data, you must compare data with caution.**

## Fertilizer Rates

| Fort St. John, B.C.       |                    | Legal Description: SW19 Tp84 R18 W6 |           |                                |                  |                               |                  |    |  |
|---------------------------|--------------------|-------------------------------------|-----------|--------------------------------|------------------|-------------------------------|------------------|----|--|
| Crop                      | Fertilizer Applied | kg/ha                               | Placement | Product:<br>Recom. vs. Applied | Enviro-Test Labs |                               |                  |    |  |
|                           |                    |                                     |           |                                | N                | P <sub>2</sub> O <sub>5</sub> | K <sub>2</sub> O | S  |  |
| <b>Canola</b>             | 27-0-0-12          | 95                                  | banded    | Recommended* =                 | 0                | 40                            | 15               | 10 |  |
|                           | 6-26-30            | 50                                  | banded    | Actually applied =             | 36               | 32                            | 17               | 13 |  |
|                           | 12-52-0            | 30                                  | in-furrow |                                |                  |                               |                  |    |  |
| <b>Flax</b>               | 20-10-10-5         | 150                                 | banded    | Recommended* =                 | 80               | 32                            | 15               | 12 |  |
|                           | 34-0-0             | 118                                 | banded    | Actually applied =             | 83               | 34                            | 17               | 8  |  |
|                           | 12-52-0            | 30                                  | in-furrow |                                |                  |                               |                  |    |  |
| <b>Wheat &amp; Barley</b> | 20-10-10-5         | 150                                 | banded    | Recommended* =                 | 30               | 30                            | 15               | 5  |  |
|                           | 12-52-0            | 30                                  | in-furrow | Actually applied =             | 38               | 34                            | 17               | 8  |  |
| <b>Oats</b>               | 20-10-10-5         | 100                                 | banded    | Recommended* =                 |                  |                               |                  |    |  |
|                           | 12-52-0            | 30                                  | in-furrow | Actually applied =             | 20               | 20                            | 10               | 5  |  |
| <b>Peas</b>               | 20-0-0-24          | 58                                  | banded    | Recommended* =                 | 20               | 35                            | 20               | 15 |  |
|                           | 6-26-30            | 100                                 | banded    | Actually applied =             | 24               | 47                            | 34               | 16 |  |
|                           | 12-52-0            | 30                                  | in-furrow |                                |                  |                               |                  |    |  |

| Dawson Creek, B.C.        |                                | Legal Description: NE18 Tp78 R14 W6 |           |                                |                  |                               |                  |    |  |
|---------------------------|--------------------------------|-------------------------------------|-----------|--------------------------------|------------------|-------------------------------|------------------|----|--|
| Crop                      | Fertilizer Applied             | kg/ha                               | Placement | Product:<br>Recom. vs. Applied | Enviro-Test Labs |                               |                  |    |  |
|                           |                                |                                     |           |                                | N                | P <sub>2</sub> O <sub>5</sub> | K <sub>2</sub> O | S  |  |
| <b>Canola</b>             | 27-0-0-12                      | 214                                 | banded    | Recommended* =                 | 50               | 30                            | 15               | 12 |  |
|                           | 6-26-30                        | 50                                  | banded    | Actually applied =             | 72               | 32                            | 17               | 29 |  |
|                           | 12-52-0                        | 30                                  | in-furrow |                                |                  |                               |                  |    |  |
| <b>Flax</b>               | 20-10-10-5                     | 150                                 | banded    | Recommended* =                 | 50               | 30                            | 15               | 10 |  |
|                           | 34-0-0                         | 48                                  | banded    | Actually applied =             | 56               | 34                            | 17               | 8  |  |
|                           | 12-52-0                        | 30                                  | in-furrow |                                |                  |                               |                  |    |  |
| <b>Wheat &amp; Barley</b> | 20-10-10-5                     | 150                                 | banded    | Recommended* =                 | 60               | 25                            | 20               | 5  |  |
|                           | 34-0-0                         | 65                                  | banded    | Actually applied =             | 62               | 34                            | 17               | 8  |  |
|                           | 12-52-0                        | 30                                  | in-furrow |                                |                  |                               |                  |    |  |
| <b>Oats</b>               | (34-0-0 not applied with oats) |                                     |           | Actually applied =             | 30               | 34                            | 17               | 8  |  |
| <b>Peas</b>               | 20-0-0-24                      | 38                                  | banded    | Recommended* =                 | 0                | 45                            | 50               | 10 |  |
|                           | 6-26-30                        | 100                                 |           | Actually applied =             | 19               | 47                            | 34               | 10 |  |
|                           | 15-52-0                        | 30                                  | in-furrow |                                |                  |                               |                  |    |  |

Recommended\* = recommendations given by Enviro-Test Labs of Calgary, Alberta, calculated from soil samples pulled earlier in the spring of the same calendar year.

## Herbicide Applications

| Fort St. John, B.C.            |              | Legal Description:   | SW19 Tp84 R18 W6                 |
|--------------------------------|--------------|--|----------------------------------|
| Crop                           | Date Applied | Product Used   | Product Rate                     |
| Canola                         | 5-Jun-03     | Decis® (insecticide for Flea Beetle)                                     | 50 ml/ac                         |
|                                | 17-Jun-03    | Muster® (ethametsulfuron methyl)<br>Lontrel 360® (clopyralid)<br>AgSurf® | 12 g/ac<br>227 ml/ac<br>0.2% v/v |
|                                | 17-Jun-03    | Poast Ultra® (sethoxydim) separate applic.<br>Merge®                     | 190 ml/ac<br>400 ml/ac           |
| Flax                           | 14-Jun-03    | Buctril M® (bromoxynil + MCPA)   | 400 ml/ac                        |
|                                | 17-Jun-03    | Poast Ultra® (sethoxydim)<br>Merge®                                      | 190 ml/ac<br>400 ml/ac           |
| Wheat, Barley, Triticale, Oats | 10-Jun-03    | Buctril M® (bromoxynil + MCPA)   | 400 ml/ac                        |
| Wheat, Barley, Triticale       | 7-Jun-03     | Achieve® 80DG<br>Turbocharge®  | 100 g/ac<br>0.5L/100L            |
| Peas                           | 7-Jun-03     | Poast Ultra® (sethoxydim)early wild oat flush<br>Merge®                  | 190 ml/ac<br>400 ml/ac           |
|                                | 27-Jun-03    | Odessey® (imazamox 35% & imazethapyr 35%)<br>Merge®                      | 17 g/ac<br>0.5% v/v              |

| Dawson Creek, B.C.             |              | Legal Description:   | NE18 Tp78 R14 W6                    |
|--------------------------------|--------------|--|-------------------------------------|
| Crop                           | Date Applied | Product Used   | Rate                                |
| Canola                         | 5-Jun-03     | Decis® (insecticide for Flea Beetle)                                     | 50 ml/ac                            |
|                                | 6-Jun-03     | Poast Ultra® (sethoxydim) + Merge  | 445 + 624 ml/ac                     |
|                                | 10-Jun-03    | Muster® (ethametsulfuron methyl)<br>Lontrel 360® (clopyralid)<br>AgSurf® | 12 g/ac<br>227 ml/ac<br>200 ml/100L |
| Flax                           | 15-Jun-03    | Buctril M® (bromoxynil + MCPA)   | 400 ml/ac                           |
| Wheat, Barley, Triticale, Oats | 9-Jun-03     | Buctril M® (bromoxynil + MCPA)   | 400 ml/ac                           |
| Peas                           |              | no herbicides needed - hand pulled                                       |                                     |

## Planting and Harvest Information

| Loc. | Crop            | Seeding rate |       | Date Planted | Soil Temp (C°) @ plant | Seeding Depth | Harvest Date | Harvesting Method |
|------|-----------------|--------------|-------|--------------|------------------------|---------------|--------------|-------------------|
|      |                 | lbs/ac       | kg/ha |              |                        |               |              |                   |
| FSJ  | Napus Canola    | 8            | 8.9   | 14-May-03    | 10                     | 1.0 inch      | 27-Sep-03    | crop-push/direct  |
|      | Rapa Canola     | 5.8          | 6.5   | 14-May-03    | 10                     | 1.0 inch      | 11-Sep-03    | direct cut        |
|      | Flax            | 38           | 43    | 22-May-03    | 13                     | 1.5 inch      | 27-Oct-03    | direct cut        |
|      | Barley          | 77           | 86    | 19-May-03    | 10                     | 1.5 inch      | 11-Sep-03    | direct cut        |
|      | CWRS Wheat      | 90           | 101   | 19-May-03    | 10                     | 1.5 inch      | 2-Oct-03     | direct cut        |
|      | CPS/CWES        | 90           | 101   | 19-May-03    | 10                     | 1.5 inch      | 2-Oct-03     | direct cut        |
|      | Oats            | 81           | 90    | 19-May-03    | 10                     | 1.5 inch      | 20-Sep-03    | direct cut        |
|      | Triticale       | 117          | 131   | 19-May-03    | 10                     | 1.5 inch      | 2-Oct-03     | direct cut        |
|      | Peas            | 149          | 149   | 15-May-03    | 8                      | 1-1.5 inch    | 20-Sep-03    | direct cut        |
| DC   | Napus Canola    | 8            | 8.9   | 13-May-03    | 9                      | 0.5-1 inch    | 26-Sep-03    | crop-push/direct  |
|      | Rapa Canola     | 5.8          | 6.5   | 13-May-03    | 9                      | 0.5-1 inch    | 10-Sep-03    | direct cut        |
|      | Flax            | 38           | 43    | 21-May-03    | 12                     | 0.75 inch     | 21-Oct-03    | direct cut        |
|      | 2Row Barley     | 77           | 86    | 17-May-03    | 7                      | 1 inch        | 9-Sep-03     | direct cut        |
|      | 6Row Barley     | 77           | 86    | 17-May-03    | 7                      | 1 inch        | 8-Sep-03     | direct cut        |
|      | Hullless Barley | 77           | 86    | 17-May-03    | 7                      | 1 inch        | 8-Sep-03     | direct cut        |
|      | CWRS Wheat      | 90           | 101   | 17-May-03    | 7                      | 1 inch        | 25-Sep-03    | direct cut        |
|      | CPS/CWES        | 90           | 101   | 17-May-03    | 7                      | 1 inch        | 30-Sep-03    | direct cut        |
|      | SWSW            | 90           | 101   | 17-May-03    | 7                      | 1 inch        | 3-Oct-03     | direct cut        |
|      | Oats            | 81           | 90    | 17-May-03    | 7                      | 1 inch        | 10-Sep-03    | direct cut        |
|      | Triticale       | 117          | 131   | 17-May-03    | 7                      | 1 inch        | 3-Oct-03     | direct cut        |
|      | Peas            | 149          | 149   | 13-May-03    | 7                      | 1 inch        | 8-Sep-03     | direct cut        |

Decis® is a registered trademark of Bayer CropScience  
Muster® is a registered trademark of DuPont Canada Inc.  
Lontrel® is a registered trademark of Dow Agrosciences Canada Inc.

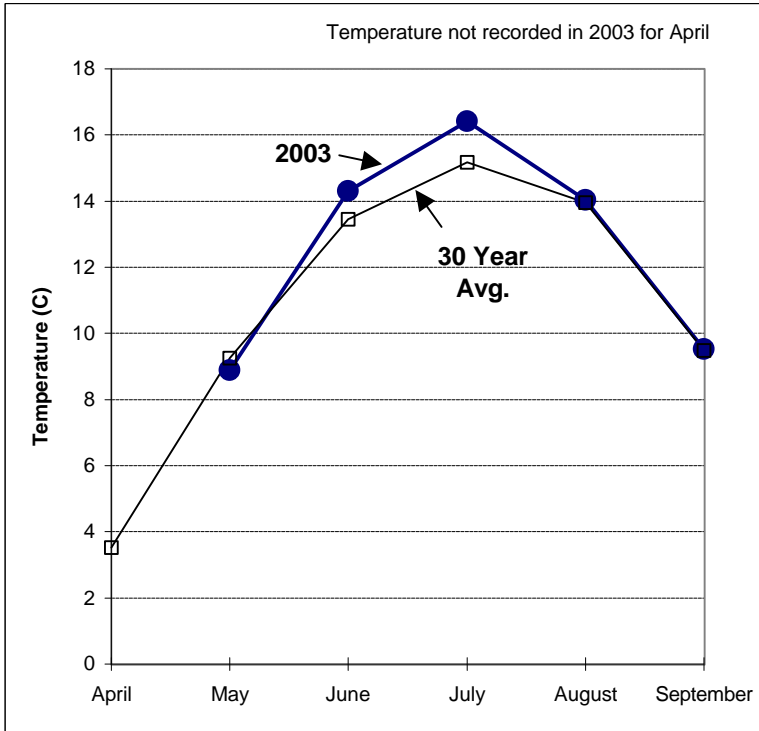
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Post Ultra® is a registered trademark of BASF Canada

Merge® is a registered trademark of BASF Canada

Buctril M® is a registered trademark of Bayer CropScience/Nufarm Canada  
Achieve® is a registered trademark of Syngenta Crop Protection Canada Inc.  
Turbocharge® is a registered trademark of Syngenta Crop Protection Canada Inc.  
Odessey® is a registered trademark of BASF Canada

## Dawson Creek Weather Information 2003



### TEMPERATURE

| Month     | Monthly Avg. Temp. (C) | Temp.* 30 year Avg. (C) |
|-----------|------------------------|-------------------------|
| April     |                        | 3.5                     |
| May       | 8.9                    | 9.2                     |
| June      | 14.3                   | 13.5                    |
| July      | 16.4                   | 15.2                    |
| August    | 14.0                   | 14.0                    |
| September | 9.5                    | 9.5                     |

**Frost Events:** May 4 -5.7  
 May 8 -4.1  
**May 19 -3.8**  
 Sept 18 -2.2  
 Sept 19 -2.0  
**Sept 30 -4.1**

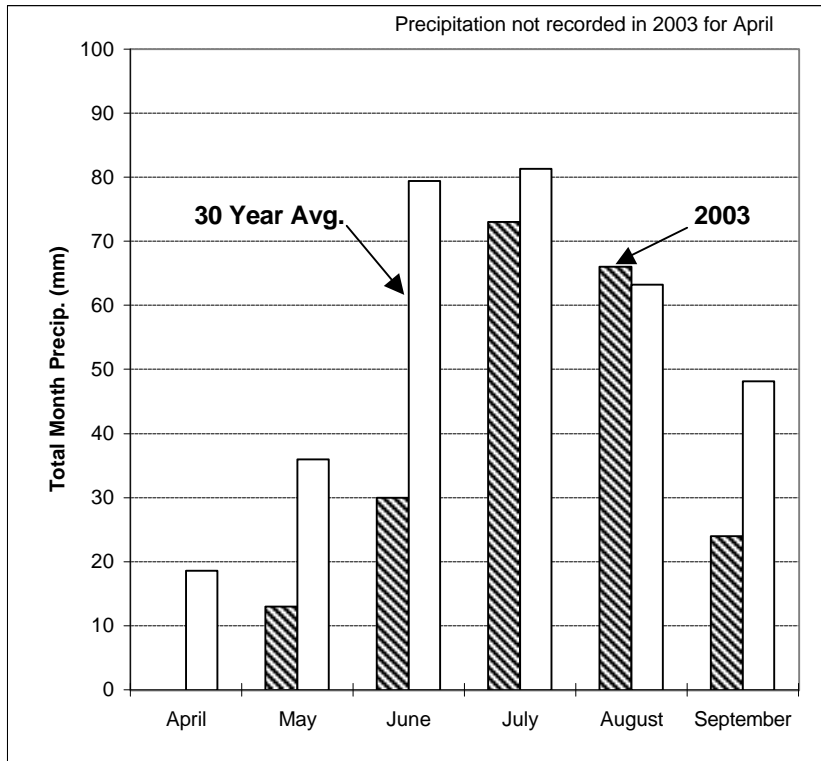
**Killing Frost (-2.2 C) Free Period: 134 days**  
 (May 19 - September 30)

\* 30 year average DC from 1968-1997  
 Source: Environment CANADA

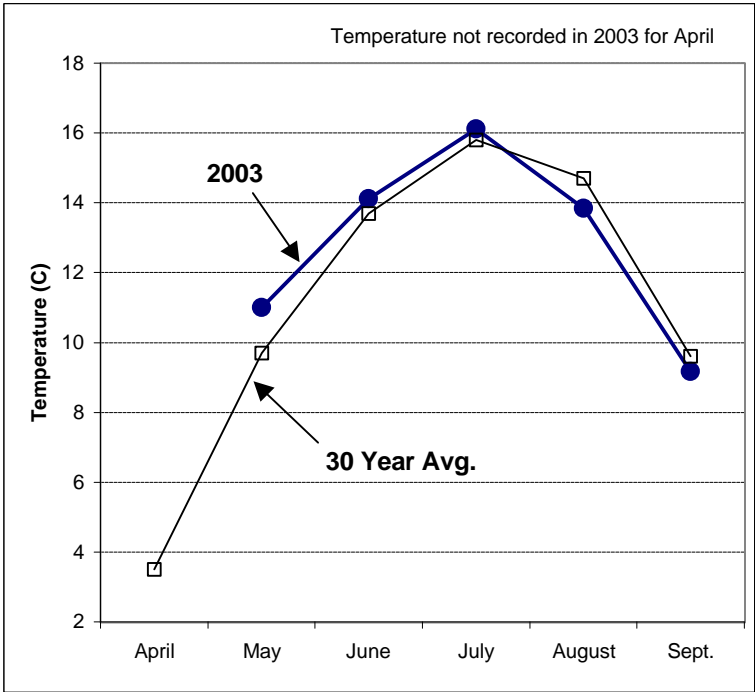
### PRECIPITATION

| Month     | Monthly Precipitation (mm) | Precipitation* 30 year Avg. (mm) |
|-----------|----------------------------|----------------------------------|
| April     |                            | 19                               |
| May       | 13                         | 36                               |
| June      | 30                         | 79                               |
| July      | 73                         | 81                               |
| August    | 66                         | 63                               |
| September | 24                         | 48                               |

Data is provided by an on site weather station maintained by the Agriculture Risk Management Branch of the BC Ministry of Agriculture, Food and Fisheries.



# Fort St. John Weather Information 2003



### TEMPERATURE

| Month  | Monthly Avg. Temp. (C) | Temp.* 30 year Avg. (C) |
|--------|------------------------|-------------------------|
| April  | -                      | 3.5                     |
| May    | 11.0                   | 9.7                     |
| June   | 14.1                   | 13.7                    |
| July   | 16.1                   | 15.8                    |
| August | 13.8                   | 14.7                    |
| Sept.  | 9.2                    | 9.6                     |

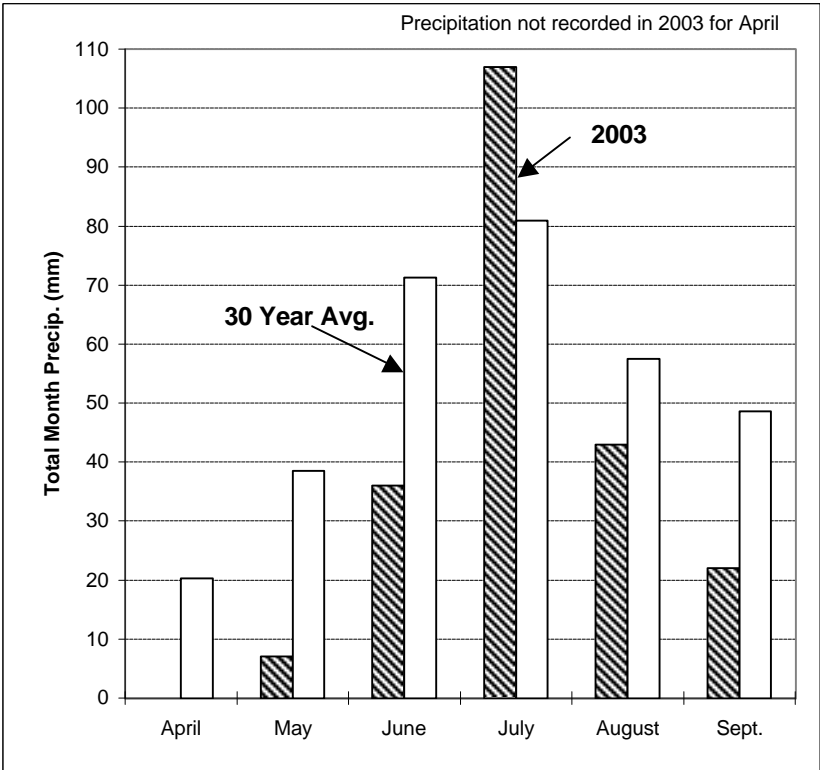
**Frost Events:** May 17 -2.6      Sept 17 -2.0  
 May 19 -2.7      Sept 25 -2.1  
 Sept 16 -1.4      **Sept 30 -5.2**

**Killing Frost (-2.2 C) Free Period: 134 days**  
 (May 19 - September 30)

\* 30 year average FSJ from 1968-1997  
 source: Environment CANADA

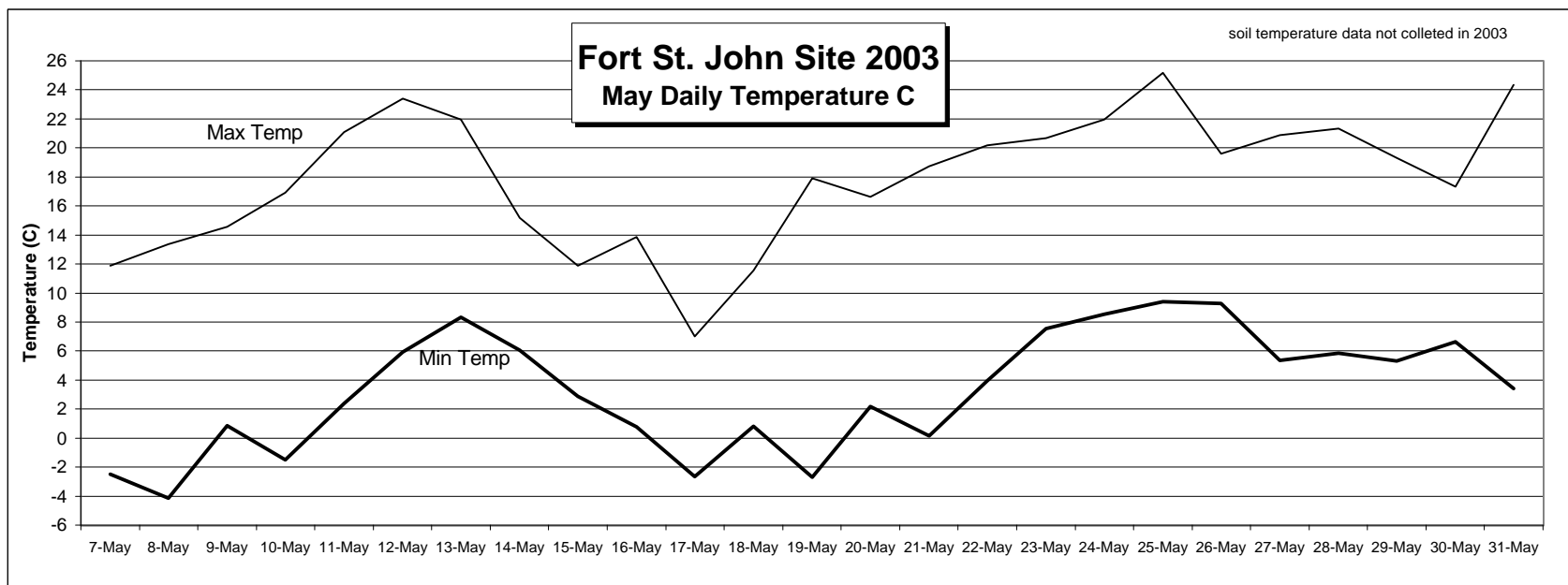
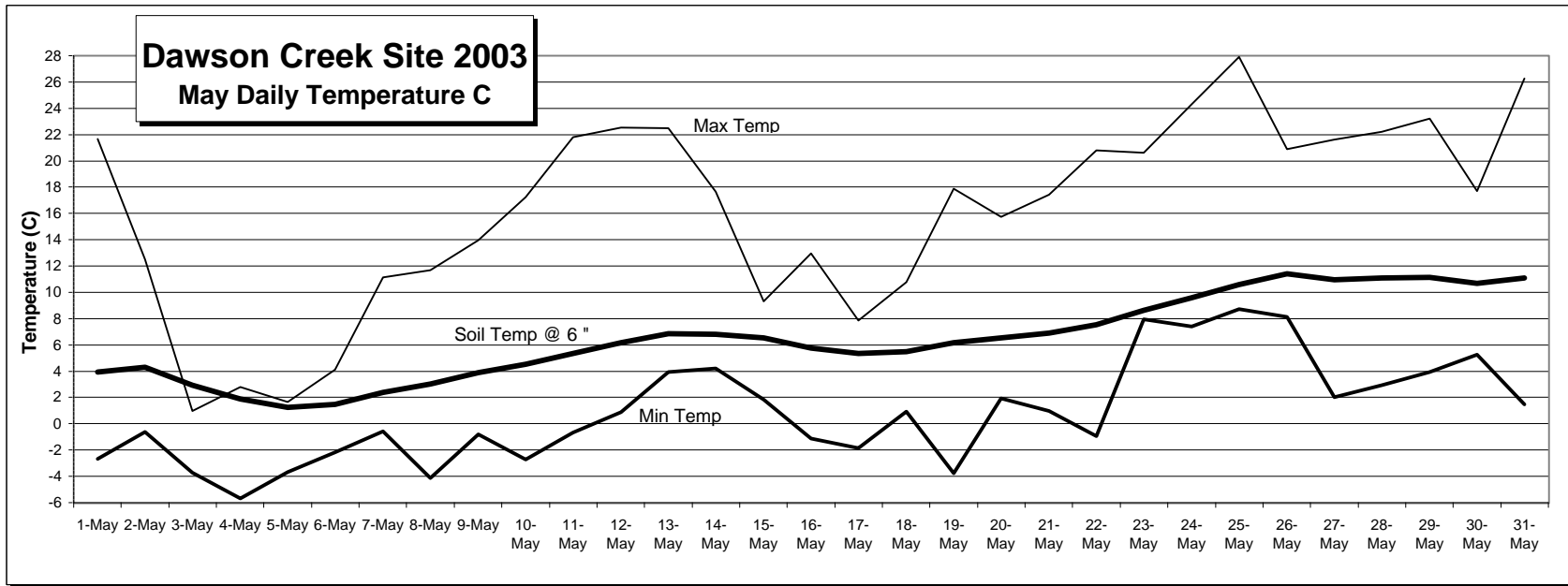
### PRECIPITATION

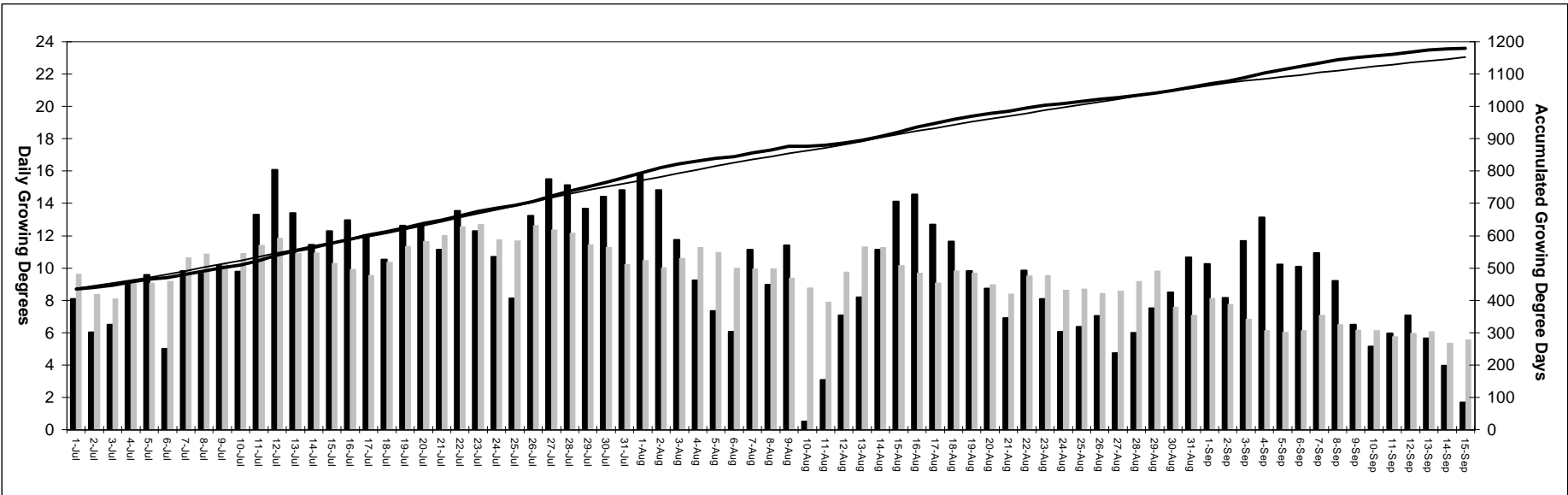
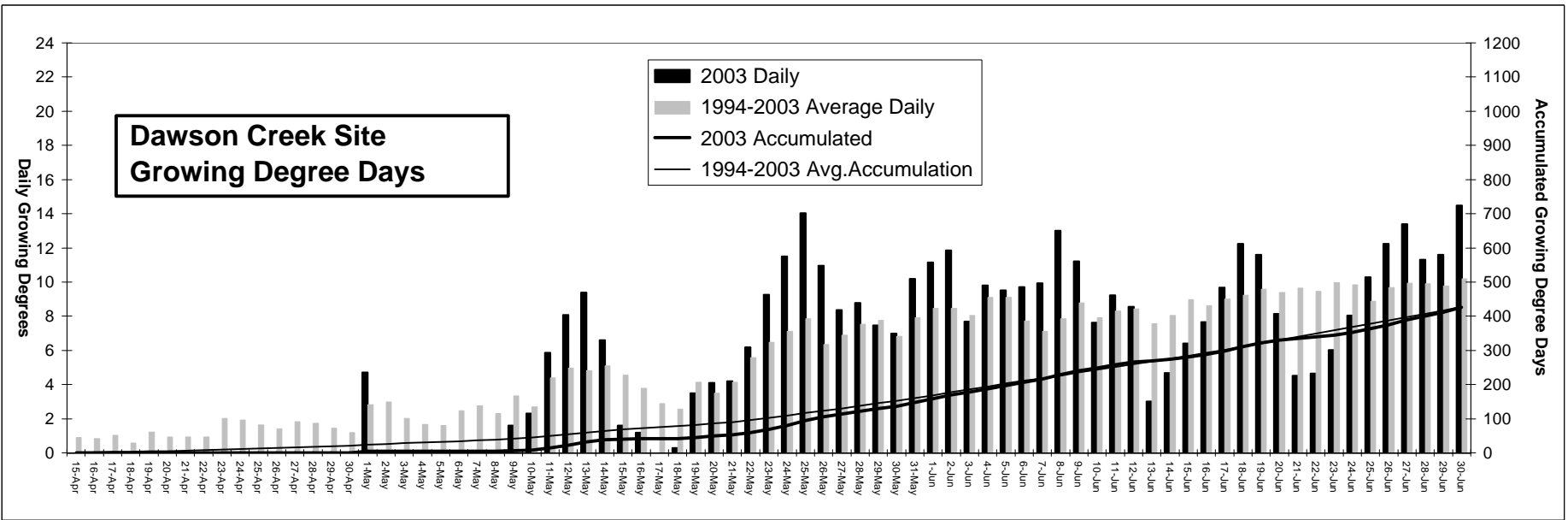
| Month  | Monthly Precipitation (mm) | Precipitation * 30 year Avg. (mm) |
|--------|----------------------------|-----------------------------------|
| April  | -                          | 20                                |
| May    | 7                          | 39                                |
| June   | 36                         | 71                                |
| July   | 107                        | 81                                |
| August | 43                         | 58                                |
| Sept.  | 22                         | 49                                |

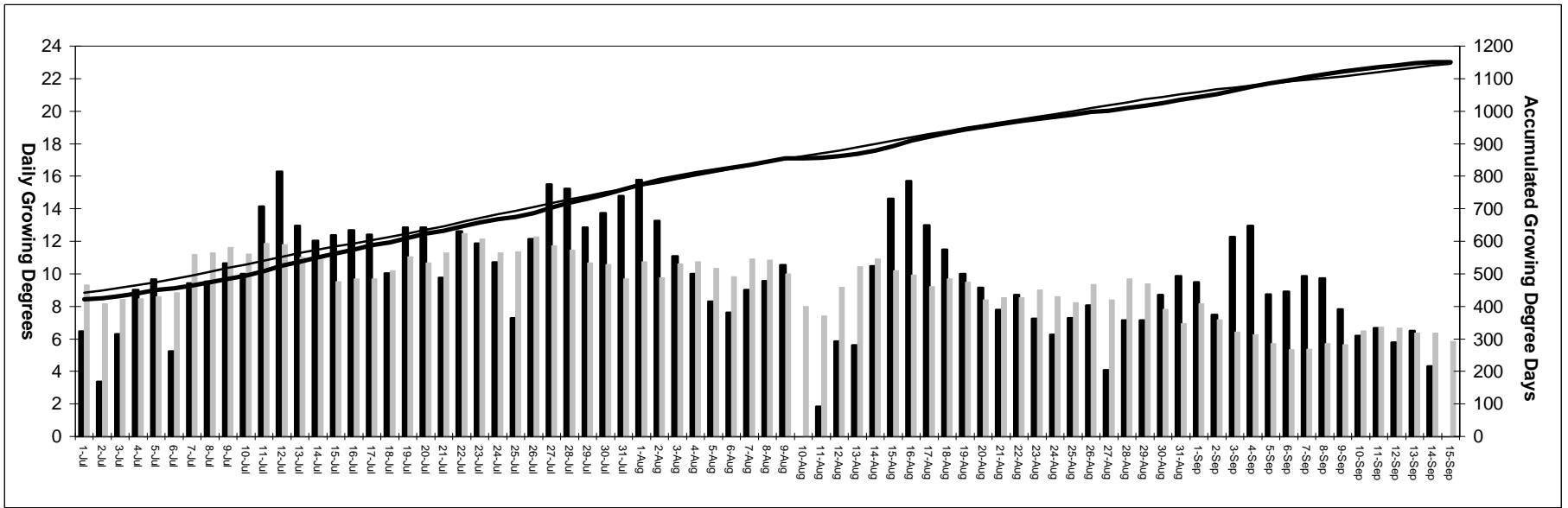
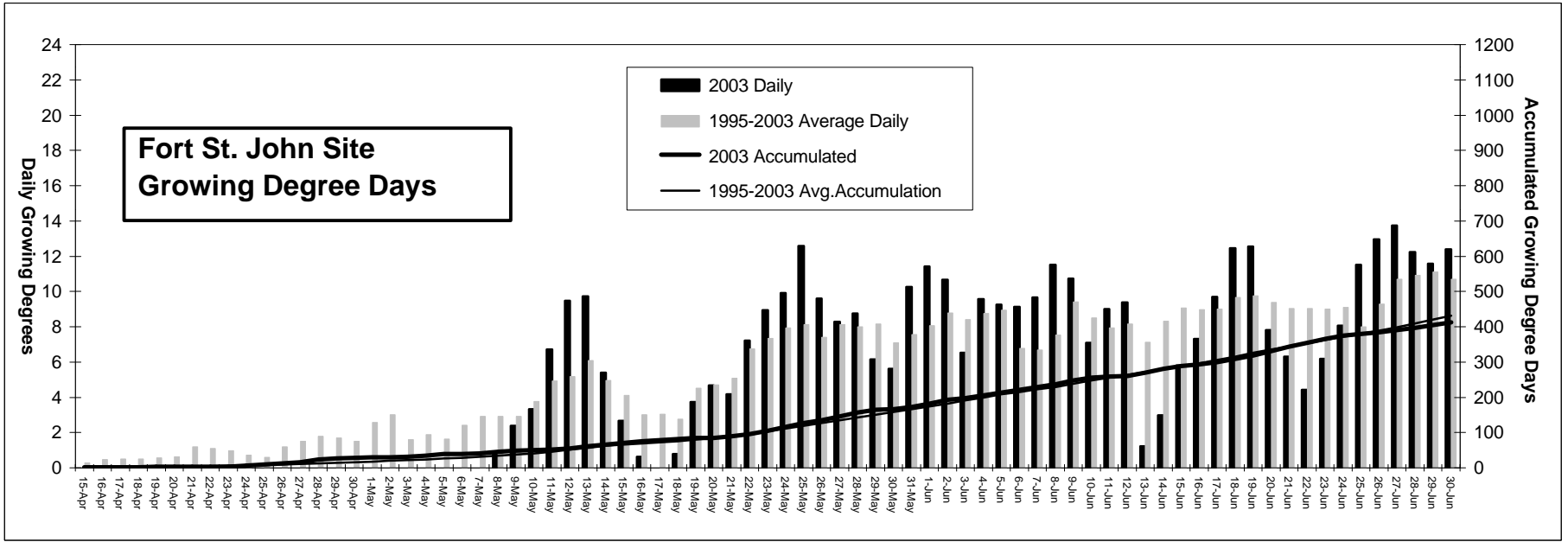


Data is provided by an on site weather station maintained by the Agriculture Risk Management Branch of the BC Ministry of Agriculture, Food and Fisheries.









## List of Certified Seed Distributors

### **Advanta Canada Inc.**

PO Box 181, Rycroft, AB T0H 3A0  
Tel: (780) 518-3963 Nick Sekulic  
Tel: (800) 661-9000 (info line)  
[www.advantacan.com](http://www.advantacan.com)

### **Agricore United / Proven Seeds**

Dawson Creek Tel: (250) 782-9264  
Fort St. John Tel: (250) 785-3445  
Proven Seeds Tel: (800) 565-7333  
[www.provenseed.com](http://www.provenseed.com)  
[www.agricoreunited.com](http://www.agricoreunited.com)

### **AgriPro**

Tel: (877) 247-4746 (USA)  
[www.agripro.com](http://www.agripro.com)

### **Agriprogress Inc.**

Box 2499 Morden, MB R6M 1C2  
Tel: (204) 822-4956

### **Bayer CropScience Canada Co.**

#100, 3131-114 Ave. SE Calgary AB T2Z3X2  
Tel: (888) 283-6847 (toll-free help desk)  
[www.bayercropscience.ca](http://www.bayercropscience.ca)

### **Bonis & Company Ltd.**

P.O. Box 217 Lindsay, ON K9V 5Z4  
Tel: (705) 324-0544

### **Brett - Young Seeds Ltd.**

Box 99, St. Norbert Postal Station,  
Winnipeg, MB R3V 1L5  
Tel: 1-800-665-5015  
[www.byseeds.com](http://www.byseeds.com)

### **Canseed Ltd.**

Tel: (403) 742-0621

### **Canterra Seeds Ltd.**

201-1475 Chevier Blvd.  
Winnipeg, MB R3T 1Y7  
Tel: (204) 992-2727  
1-877-439-7333 (toll-free)  
[www.canterra.com](http://www.canterra.com)

### **Cargill**

6711-93 Ave., Fort St. John, BC V1J 6K8  
Tel: (250) 787-0638  
[www.cargill.com](http://www.cargill.com)

### **Columbia Seed Co. Ltd.**

Box 657 Grassy Lake, AB T0K 0Z0  
Tel: (403) 655-2420  
[www.klempnauer.ab.ca/cseed.html](http://www.klempnauer.ab.ca/cseed.html)

### **Dekalb Canada Seeds (Monsanto)**

67 Scurfield Blvd. Winnipeg, MB R3Y 1G4  
Tel: (800) 667-4944  
[www.dekalb.com](http://www.dekalb.com)

### **DSV Canada Inc.**

Box 99 St. Norbert Postal Station  
Winnipeg, MB R3V 1L5  
Tel: (204) 261-7932

### **Newfield Seeds**

Box 100 Nipawin, SK S0E 1E0  
Tel: (306) 862-4678  
[www.newfieldseeds.com](http://www.newfieldseeds.com)

### **Prairie Seeds Ltd.**

1805 - 8 Street, Nisku AB T9E 7S8  
Tel: (780) 955-7906 or (800) 222-6443  
[www.prairieseeds.com](http://www.prairieseeds.com)

### **Progressive Seeds Ltd.**

4819C-48 Ave Red Deer, AB T4N 3T2  
Tel: (403) 347-4925  
[www.progressive-seeds.ca](http://www.progressive-seeds.ca)

### **Pioneer Hybrid**

Box 730 Country Rd 264  
Chatham, ON N7M 5L1  
Tel: (250) 782-4800 or (800) 265-9435  
[www.pioneer.com/canada](http://www.pioneer.com/canada)

### **Quality Assured Seeds**

422 McDonald St. Regina SK S4N 6E1  
Tel: (877) 791-0500  
[www.qas-online.com](http://www.qas-online.com)

### **SeCan Association**

201-52 Antares Dr. Ottawa ON K2E 7Z1  
Tel: (613) 225-6891 or (800) 764-5487  
[www.secan.com](http://www.secan.com)

### **Seed-Link Inc.**

Box 217 Lindsay, ON K9V 5Z4  
Tel: (705) 324-0544  
[www.seed-link.ca](http://www.seed-link.ca)

### **S.S. Johnson Seeds Ltd.**

Box 3000 Arborg, MB R0C 0A0  
Tel: (204) 376-5228  
Toll-free: 1-800-363-9442  
[www.johnsonseeds.com](http://www.johnsonseeds.com)

### **St. Denis Seed Farm Inc.**

Tel: (780) 961-3368

### **Svalof Weibull Ltd.**

2-411 Downey Rd., Saskatoon SK  
S7N 4L8 Tel: (306) 477-5230  
[www.swseed.ca](http://www.swseed.ca)

### **Syngenta**

15910 Medway Rd. RR 1  
Arva, ON N0M 1C0  
Tel: 1-800-665-9250  
[www.syngenta.com](http://www.syngenta.com)

### **University of Alberta**

114 St 89 Ave. Edmonton, AB T6G 2M7  
Tel: (403) 492-3239  
[www.afns.ualberta.ca](http://www.afns.ualberta.ca)

### **Western Growers Seed Corp.**

144 Jessup Ave.  
Saskatoon, SK S7N 1Y4  
Tel: (306) 373-2400