



# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## CONSERVATION LEARNING CENTRE

Saskatchewan 53.03°N 105.77°W Estab. 2011

Preliminary **February 2016**

| Day     | Temperature |              |              | Degree-days |           |           | Precipitation  |                |                      | Relative Humidity |              | Station Pressure<br><i>corrected to sea level</i> |              |
|---------|-------------|--------------|--------------|-------------|-----------|-----------|----------------|----------------|----------------------|-------------------|--------------|---|--------------|
|         | Max         | Min          | Mean         | Growing     | Heating   | Cooling   | Weighing Gauge | Notes          | Snow-on-Ground 0900h | Max ½ hr Avg      | Min ½ hr Avg | Max ½ hr Avg                                      | Min ½ hr Avg |
|         | °C          | °C           | °C           | 5°C base    | 18°C base | 18°C base | mm             |                | cm                   | %                 | %            | mbar  | mbar         |
| 1       | -10.1       | -21.6        | -15.9        | 0.0         | 33.9      | 0.0       | 0.1            |                | 21                   | 88                | 68           | 1018  | 1010         |
| 2       | -6.4        | -18.7        | -12.6        | 0.0         | 30.6      | 0.0       | 0.2            |                | 21                   | 87                | 77           | 1018  | 1014         |
| 3       | -7.6        | -19.7        | -13.7        | 0.0         | 31.7      | 0.0       | 0.6            |                | 22                   | 90                | 75           | 1015  | 1013         |
| 4       | -9.6        | -17.8        | -13.7        | 0.0         | 31.7      | 0.0       | 0.3            |                | 22                   | 89                | 77           | 1018  | 1013         |
| 5       | -7.3        | -12.8        | -10.1        | 0.0         | 28.1      | 0.0       | 0.4            |                | 24                   | 88                | 78           | 1018  | 1004         |
| 6       | 3.8         | -11.8        | -4.0         | 0.0         | 22.0      | 0.0       | 0.0            |                | 21                   | 91                | 58           | 1003  | 993          |
| 7       | -2.1        | -10.3        | -6.2         | 0.0         | 24.2      | 0.0       | 0.1            |                | 21                   | 86                | 62           | 1024  | 1003         |
| 8       | -3.7        | -14.7        | -9.2         | 0.0         | 27.2      | 0.0       | 0.0            |                | 21                   | 91                | 73           | 1026  | 1021         |
| 9       | -7.0        | -11.4        | -9.2         | 0.0         | 27.2      | 0.0       | 2.4            |                | 20                   | 91                | 74           | 1023  | 1011         |
| 10      | -7.5        | -13.7        | -10.6        | 0.0         | 28.6      | 0.0       | 0.3            |                | 23                   | 91                | 75           | 1023  | 1011         |
| 11      | -12.7       | -21.9        | -17.3        | 0.0         | 35.3      | 0.0       | 0.1            |                | 22                   | 88                | 69           | 1031  | 1022         |
| 12      | -20.0       | -31.4        | -25.7        | 0.0         | 43.7      | 0.0       | 0.1            |                | 22                   | 83                | 62           | 1035  | 1023         |
| 13      | -7.9        | -24.6        | -16.3        | 0.0         | 34.3      | 0.0       | 0.1            |                | 21                   | 86                | 69           | 1023  | 1005         |
| 14      | 4.1         | -12.5        | -4.2         | 0.0         | 22.2      | 0.0       | 0.0            |                | 22                   | 93                | 57           | 1005  | 1001         |
| 15      | -4.9        | -15.5        | -10.2        | 0.0         | 28.2      | 0.0       | 0.5            |                | 22                   | 92                | 77           | 1011  | 1000         |
| 16      | -4.8        | -13.3        | -9.1         | 0.0         | 27.1      | 0.0       | 0.0            |                | 23                   | 92                | 77           | 1011  | 1008         |
| 17      | 5.2         | -9.9         | -2.4         | 0.0         | 20.4      | 0.0       | 0.0            |                | 23                   | 95                | 52           | 1007  | 1003         |
| 18      | -1.6        | -7.7         | -4.7         | 0.0         | 22.7      | 0.0       | 0.0            |                | 23                   | 95                | 89           | 1002  | 989          |
| 19      | -1.2        | -17.7        | -9.5         | 0.0         | 27.5      | 0.0       | 2.4            |                | 23                   | 95                | 72           | 1010  | 988          |
| 20      | -7.5        | -26.4        | -17.0        | 0.0         | 35.0      | 0.0       | 2.2            |                | 32                   | 85                | 50           | 1024  | 1011         |
| 21      | -5.8        | -27.6        | -16.7        | 0.0         | 34.7      | 0.0       | 0.0            |                | 32                   | 90                | 70           | 1024  | 1014         |
| 22      | -0.9        | -15.3        | -8.1         | 0.0         | 26.1      | 0.0       | 0.0            |                | 31                   | 92                | 61           | 1013  | 1008         |
| 23      | 2.7         | -16.0        | -6.7         | 0.0         | 24.7      | 0.0       | 0.0            |                | 29                   | 90                | 50           | 1016  | 1012         |
| 24      | -1.3        | -15.8        | -8.6         | 0.0         | 26.6      | 0.0       | 0.1            |                | 29                   | 86                | 55           | 1025  | 1015         |
| 25      | -0.4        | -17.7        | -9.1         | 0.0         | 27.1      | 0.0       | 0.0            |                | 29                   | 89                | 65           | 1025  | 1012         |
| 26      | 6.7         | -10.1        | -1.7         | 0.0         | 19.7      | 0.0       | 0.0            |                | 29                   | 90                | 46           | 1012  | 1002         |
| 27      | -0.3        | -15.2        | -7.8         | 0.0         | 25.8      | 0.0       | 3.9            |                | 27                   | 91                | 80           | 1009  | 1002         |
| 28      | -5.5        | -24.1        | -14.8        | 0.0         | 32.8      | 0.0       | 0.3            |                | 28                   | 88                | 46           | 1020  | 1005         |
| 29      | -14.2       | -34.5        | -24.4        | 0.0         | 42.4      | 0.0       | 0.1            |                | 28                   | 73                | 32           | 1022  | 1019         |
|         |             |              |              |             |           |           |                |                |                      |                   |              |   |              |
|         |             |              |              |             |           |           |                |                |                      |                   |              |   |              |
| Total   |             |              |              | 0.0         | 841.5     | 0.0       | 14.2           |                |                      |                   |              |   |              |
| Avg     | <b>-4.4</b> | <b>-17.6</b> | <b>-11.0</b> |             |           |           | 32.4           | Cumulative ppt |                      |                   |              |   |              |
| Extreme | 6.7         | -34.5        |              |             |           |           | 3.9            |                | 32                   | 95                | 32           | 1035  | 988          |
| Date    | 26          | 29           |              |             |           |           | 27             |                | 20                   | 17                | 29           | 12  | 19           |

**SRC proudly recognizes the following CRS supporters:**



Agriculture and Agri-Food Canada

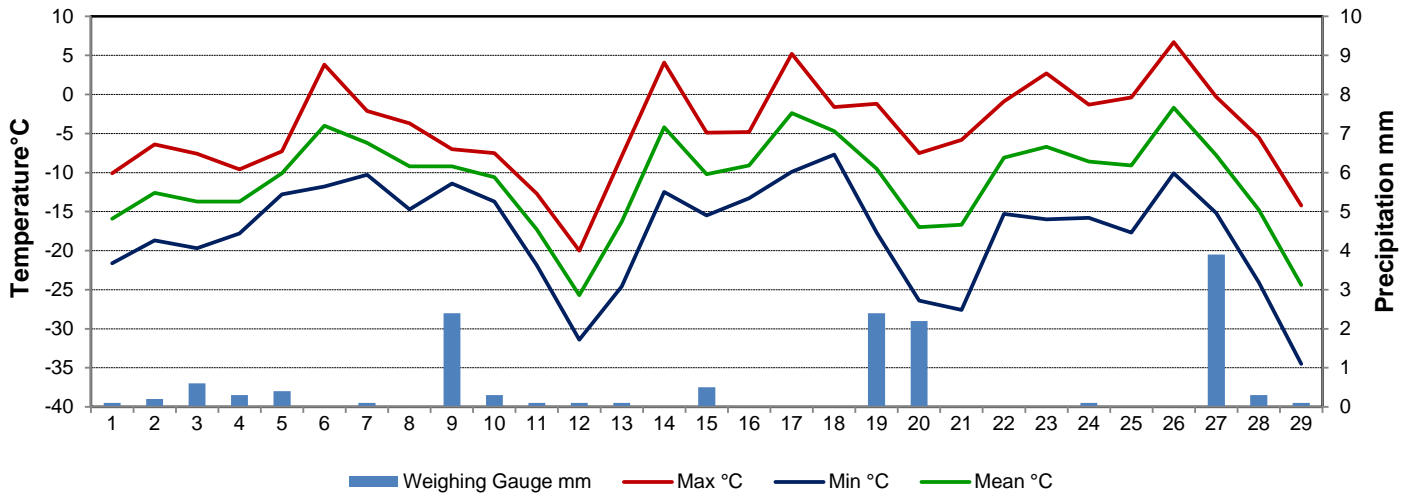
Agriculture et Agroalimentaire Canada



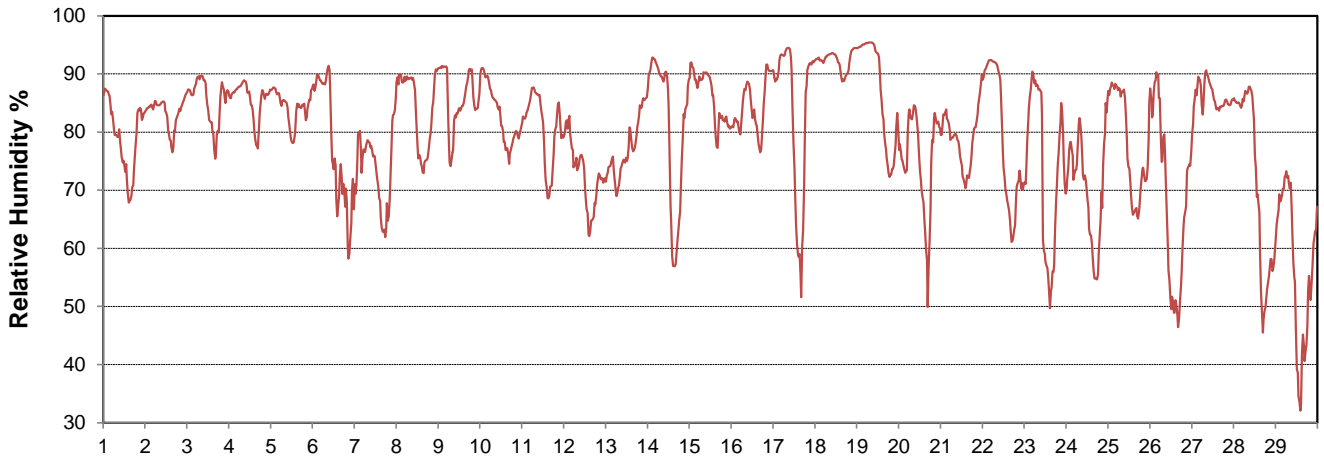
CAMPBELL SCIENTIFIC  
WHEN MEASUREMENTS MATTER



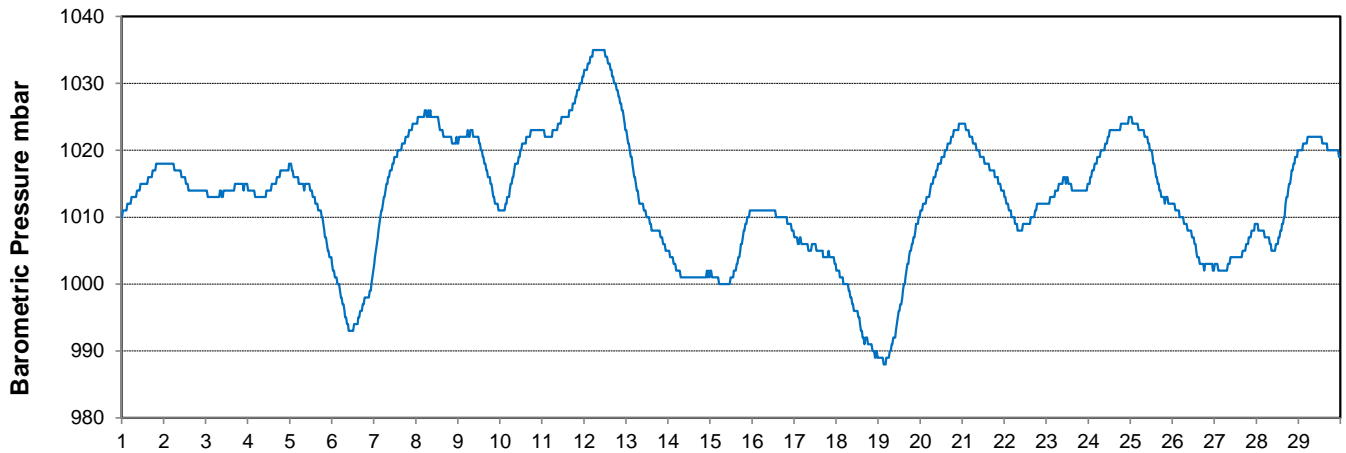
### Temperature and Precipitation for February 2016



### Relative Humidity for February 2016



### Barometric Pressure Corrected to Sea Level for February 2016





# SRC CLIMATE REFERENCE STATION DAILY DATA REPORT

## CONSERVATION LEARNING CENTRE

Saskatchewan 53.03°N 105.77°W Estab. 2011

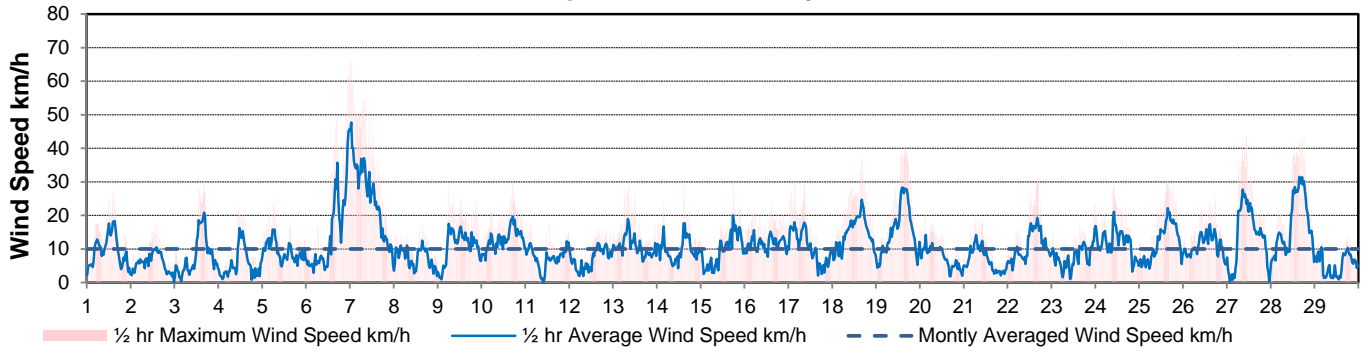
Preliminary **February 2016**

| Day     | Wind Gust |           |       | Soil Temperatures at 0900hrs |      |       |       |       |        |        |        | Soil Moisture | Radiation                         |                   |                   |
|---------|-----------|-----------|-------|------------------------------|------|-------|-------|-------|--------|--------|--------|---------------|-----------------------------------|-------------------|-------------------|
|         | Max       | Direction | Time  | Surface                      | 5 cm | 10 cm | 20 cm | 50 cm | 100 cm | 150 cm | 300 cm | 0900hrs       | Bright Sunshine                   | Global            | Diffuse           |
|         | km/h      |           |       | °C                           | °C   | °C    | °C    | °C    | °C     | °C     | °C     | %             | hours                             | MJ/m <sup>2</sup> | MJ/m <sup>2</sup> |
| 1       | 27.4      | NW        | 15:11 | -11.0                        | 0.0  | 0.0   | 0.0   | 0.5   | 2.0    | 4.5    | 5.5    | 23            | 0.4                               | 3.7               | 3.4               |
| 2       | 18.5      | SW        | 14:13 | -13.0                        | -0.5 | -0.5  | 0.0   | 1.0   | 2.0    | 4.0    | 5.5    | 22            | 0.0                               | 3.2               | 3.0               |
| 3       | 30.1      | NW        | 16:12 | -9.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.5    | 21            | 0.0                               | 3.4               | 3.1               |
| 4       | 22.7      | N         | 11:24 | -9.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.5    | 21            | 0.0                               | 3.6               | 3.3               |
| 5       | 25.5      | SW        | 6:51  | -10.0                        | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.5    | 21            | 0.0                               | 4.1               | 3.8               |
| 6       | 64.3      | NW        | 23:47 | -6.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.0    | 20            | 4.0                               | 6.1               | 3.0               |
| 7       | 66.1      | NW        | 0:41  | -6.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.0    | 20            | 3.1                               | 5.2               | 3.2               |
| 8       | 17.0      | S         | 15:47 | -10.0                        | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.5    | 20            | 0.0                               | 4.0               | 3.6               |
| 9       | 28.2      | E         | 6:24  | -9.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.0    | 19            | 0.0                               | 4.0               | 3.7               |
| 10      | 29.3      | NNE       | 17:24 | -10.0                        | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.0    | 19            | 0.0                               | 4.2               | 3.9               |
| 11      | 17.7      | N         | 13:07 | -12.0                        | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.0    | 19            | 1.6                               | 5.6               | 3.9               |
| 12      | 16.2      | ENE       | 16:06 | -23.5                        | -0.5 | -0.5  | 0.0   | 1.0   | 2.0    | 4.0    | 5.5    | 19            | 8.1                               | 9.6               | 2.3               |
| 13      | 30.4      | S         | 8:33  | -12.5                        | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 4.0    | 5.0    | 18            | 0.0                               | 2.8               | 2.6               |
| 14      | 28.8      | W         | 14:52 | -12.0                        | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 3.5    | 5.0    | 18            | 7.7                               | 9.0               | 2.0               |
| 15      | 29.3      | NNE       | 17:39 | -8.5                         | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 3.5    | 5.0    | 18            | 0.0                               | 4.5               | 4.0               |
| 16      | 23.4      | S         | 14:32 | -11.5                        | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 3.5    | 5.0    | 18            | 0.6                               | 5.5               | 5.0               |
| 17      | 31.2      | WSW       | 3:01  | -3.0                         | -0.5 | -1.0  | -0.5  | 0.0   | 1.5    | 3.5    | 4.5    | 18            | 7.6                               | 8.6               | 2.0               |
| 18      | 37.0      | ESE       | 16:49 | -4.5                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.5    | 5.0    | 18            | 0.0                               | 3.5               | 3.1               |
| 19      | 40.1      | NNW       | 15:38 | -1.5                         | -0.5 | -0.5  | -0.5  | 0.5   | 1.5    | 3.5    | 4.5    | 18            | 0.0                               | 4.6               | 4.3               |
| 20      | 20.3      | N         | 3:08  | -5.5                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.5    | 5.0    | 19            | 7.9                               | 9.2               | 3.1               |
| 21      | 20.6      | SW        | 6:36  | -7.5                         | -0.5 | -0.5  | 0.0   | 0.5   | 2.0    | 3.5    | 5.0    | 19            | 0.0                               | 5.7               | 5.3               |
| 22      | 31.0      | S         | 16:02 | -4.5                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.5    | 5.0    | 19            | 7.5                               | 9.1               | 2.6               |
| 23      | 22.7      | NW        | 23:38 | -7.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.5    | 5.0    | 19            | 10.0                              | 11.4              | 2.0               |
| 24      | 29.1      | NW        | 10:22 | -6.5                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.5    | 5.0    | 19            | 7.3                               | 9.8               | 3.6               |
| 25      | 30.6      | SW        | 15:32 | -8.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.0    | 5.0    | 19            | 3.8                               | 8.8               | 6.7               |
| 26      | 25.7      | W         | 17:35 | -5.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.0    | 5.0    | 19            | 9.7                               | 11.0              | 2.0               |
| 27      | 43.7      | ENE       | 10:39 | -5.0                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.0    | 5.0    | 19            | 0.0                               | 6.1               | 5.6               |
| 28      | 44.0      | NNE       | 18:07 | -6.5                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.0    | 4.5    | 19            | 3.2                               | 7.6               | 4.9               |
| 29      | 13.5      | S         | 17:52 | -19.0                        | -0.5 | -0.5  | 0.0   | 0.5   | 1.5    | 3.0    | 5.0    | 19            | 10.5                              | 20.5              | 1.8               |
|         |           |           |       |                              |      |       |       |       |        |        |        |               |                                   |                   |                   |
|         |           |           |       |                              |      |       |       |       |        |        |        |               |                                   |                   |                   |
| Total   |           |           |       |                              |      |       |       |       |        |        |        |               | 93.0                              | 194.4             | 100.8             |
| Mean    |           |           |       | -8.8                         | -0.5 | -0.5  | 0.0   | 0.5   | 1.8    | 3.7    | 5.1    | 19.3          |                                   |                   |                   |
| Extreme | 66.1      | NW        | 0:41  |                              |      |       |       |       |        |        |        |               | Bright sunshine hours are suspect |                   |                   |
| Date    | 7         |           |       |                              |      |       |       |       |        |        |        |               |                                   |                   |                   |

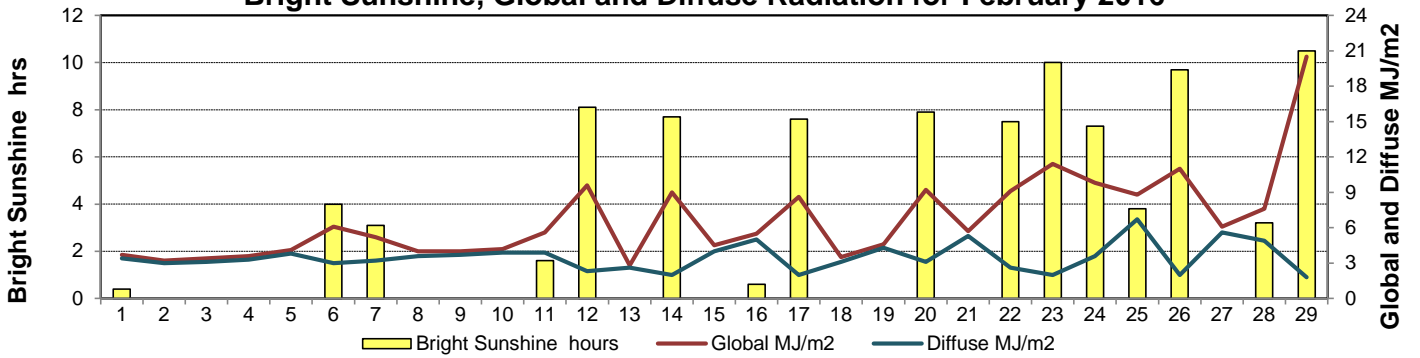
### GLOSSARY OF TERMS

|  |  |
|--|--|
| <b>Degree-days</b>                           | <b>Radiation</b>   |
| Tm Mean Temperature                          | Bright Sunshine is the unobstructed direct radiation from the sun, as opposed to the shading of a location by clouds or by other atmospheric obstructions. |
| Growing (Tm-5°C); if Tm ≤ 5°C then GDD = 0   |  |
| Heating (18°C-Tm); if Tm ≥ 18°C then HDD = 0 | Diffuse is radiation reaching the earth's surface after having been scattered from the direct solar beam   |
| Cooling (Tm-18°C); if Tm ≤ 18°C then CDD = 0 | Global is the sum of the direct solar and diffuse radiation  |
| T Trace of Precipitation                     | <b>Relative Humidity</b> The ratio of the air's water vapour content to its water vapour capacity which changes with temperature.                          |
| <b>SOG</b> Depth of snow-on-the-ground       |  |
| <b>Red Cell</b> no data available            | <b>Air Pressure</b> The force exerted by the weight of a column of air above a given point   |
| <b>Red Number</b> manual calculation         | <b>Wind Gust</b> The daily highest instantaneous value recorded irrespective of direction and/or duration  |

### Wind Speed for February 2016

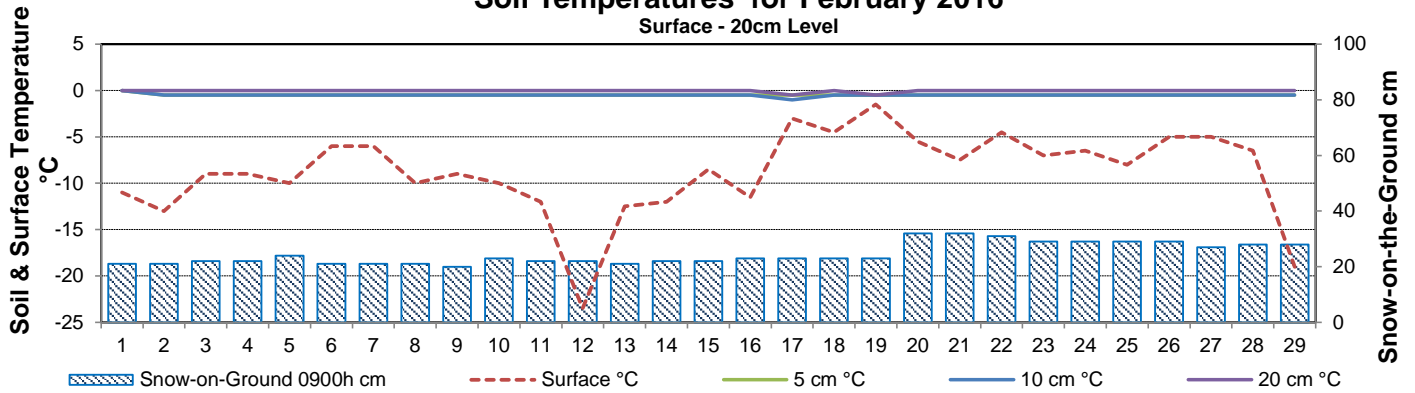


### Bright Sunshine, Global and Diffuse Radiation for February 2016



### Soil Temperatures for February 2016

Surface - 20cm Level



### Soil Temperatures for February 2016

50 - 300cm Level

