Energy, Mines and Resources Canada | Énergie, Mines et Ressources Canada

THE NATIONAL ATLAS OF CANADA 5th EDITION

CANADA — LAST FROST IN SPRING

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Scale 1:7 500 000 or one centimetre equals 75 kilometres

75 0 75 150 225 300 375 450 kilometres

Lambert Conformal Conic Projection, Standard Parallels 49°N and 77°N.
Modified Polyconic Projection, North of Latitude 80°.

LAST FROST IN SPRING

Frost is assumed to occur when the minimum daily temperature is 0°C or less. The Atmospheric Environment Service frost data used for this map are based on minimum daily temperatures as observed at a height of approximately 1.5 m above the ground. Average dates of occurrence of the last spring frost at ground level will be somewhat later than the dates shown on the map, because under conditions of clear skies and light winds (conditions that usually prevail at times of late spring frost occurrence), minimum temperatures near ground level are always lower than the recorded minimum temperatures. This difference is usually between 3° and 6°C, but can be as great as 14°C.

Local topography has a significant influence on the incidence of frost. Cooler, denser air tends to drain to lower levels and to collect in valleys or depressions, particularly in the absence of winds, which results in a later occurrence of the last spring frost in these locations. Alternatively, ground fog may sometimes prevent a lowering of temperatures in valley locations thereby averting the incidence of frost. In spring, large open water bodies cool the overriding air, thus prolonging the last occurrence of frost in adjacent areas.

Average Dates of Occurence of Last Frost in Spring

April 1 | May 1 | June 1 | July 1

April 15 | May 15 | June 15

• Climatological recording station

Note:
Average dates of occurrence of the last frost in spring were derived for approximately 1 200 climatological stations from 1941-1970 minimum daily temperature normals. Because of the constraints on isoline interpolation imposed by the uneven and often sparse distribution of recording stations, the climatological recording station network can be used as a partial index of isoline reliability. Isolines are most representative in areas of uniform flat terrain. Significant local deviations from the pattern indicated should be expected as terrain irregularity increases. Abrupt changes in climatic characteristics occur in mountainous regions in response to significant variations of elevation, aspect and slope, within short distances. In areas of mountainous terrain, isolines are representative of valley conditions only. A discontinuous line symbol is used over water bodies to indicate approximate values.

This map was prepared in association with the Canadian Climate Centre, Atmospheric Environment Service, Environment Canada. Scientific advisor D.W. Phillips, Canadian Climate Centre. Research by G.M. Hemmerick and G.R. Kendall, Canadian Climate Centre and S.A. Kelly, Geographical Research Division. Cartography by the Cartography and Toponymy Division.

Sources
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