

Dawson attributes this fact, and I think correctly, to 'the increased loss of heat by radiation due to the greater elevation and drier atmosphere,' and during the 'growing months' in 1903 there were very few nights, even when cloudy, that the thermometer did not fall below 50°. It will thus be seen that, though the hours of daylight are long in latitude 56°, the days are not very warm; the early and late hours of daylight are cool and the nights cold. Continued hot or 'muggy' weather, so common in the east, is absolutely unknown, and it follows that there is constant interruption in the growing time. June is a very uncertain month, sometimes being very wet, and again so dry that growing crops suffer from drought. July is, as it should be, dry, but unfortunately the month of August, upon which so much depends, is too frequently cold and wet. When that month is warm and there are no exceptionally heavy and long continued rains, a harvest may be hoped for if a severe frost is escaped, but in years like 1903, when the whole month, and especially the last two weeks, was characterized by wet, cold weather, it is impossible for wheat to ripen before the frosts, that must certainly come during the first week in September.

I was told that 1903 was an exceptional year, but others, who Climate. reported the same conditions in other years, were told the same thing and there are enough of these 'exceptional' years to warrant the belief that they may be expected at any time. Conclusions drawn from comparisons of mean temperatures, of hours of daylight, &c., are of no value when confronted with the undoubted fact that in one locality the thermometer falls to a point when wheat will be injured, while in another it does not. It has been said and will be said, that with settlement the climate will change. Perhaps it will to a certain extent, but more is to be hoped from hardier kinds of grain; grain that can adapt itself to severer conditions and which will ripen earlier. The Grande prairie and Spirit river regions will undoubtedly be better suited for grain culture when they have been drained, so that water will not lie on the clay subsoil; but the simple cultivation of the soil can do little to ameliorate the climate. If large tracts were ploughed and summer-fallowed, radiation from these would tend to keep the temperature a little higher, but on cultivated ground the vegetation is naturally taller and denser than where it is unbroken.

What has been said of wheat applies in a less degree to barley and oats. These grains, however, generally ripen earlier, especially barley, and it is probable that in most years barley would mature.