

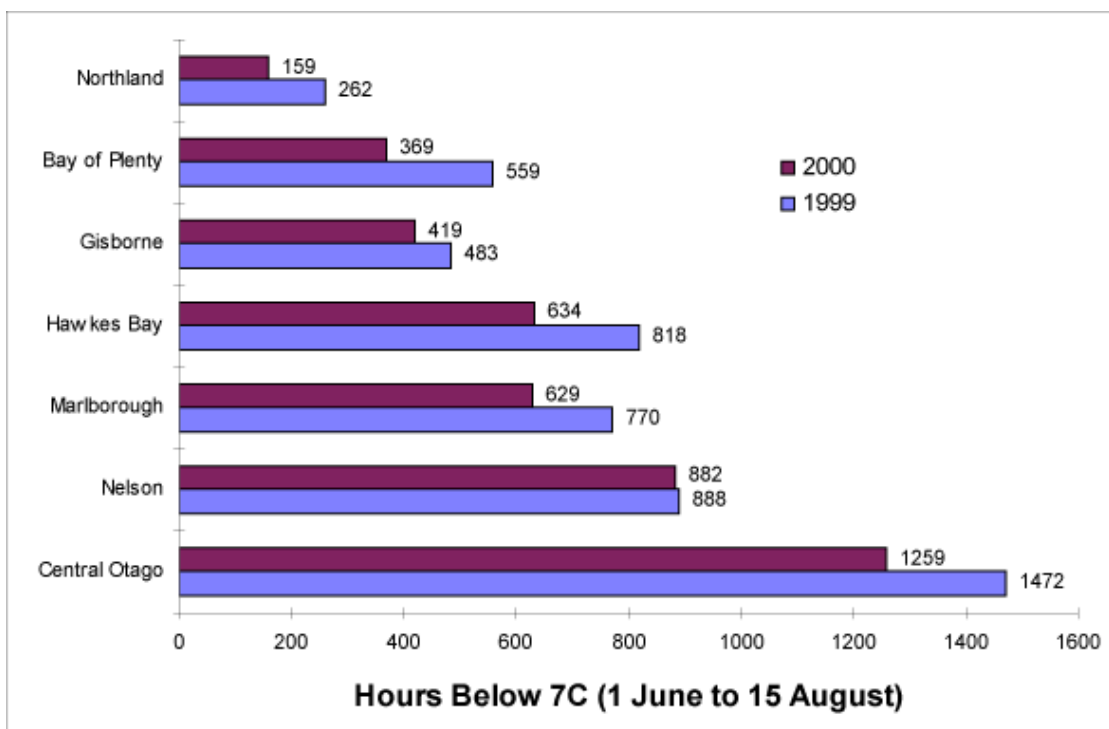


Weather Sense
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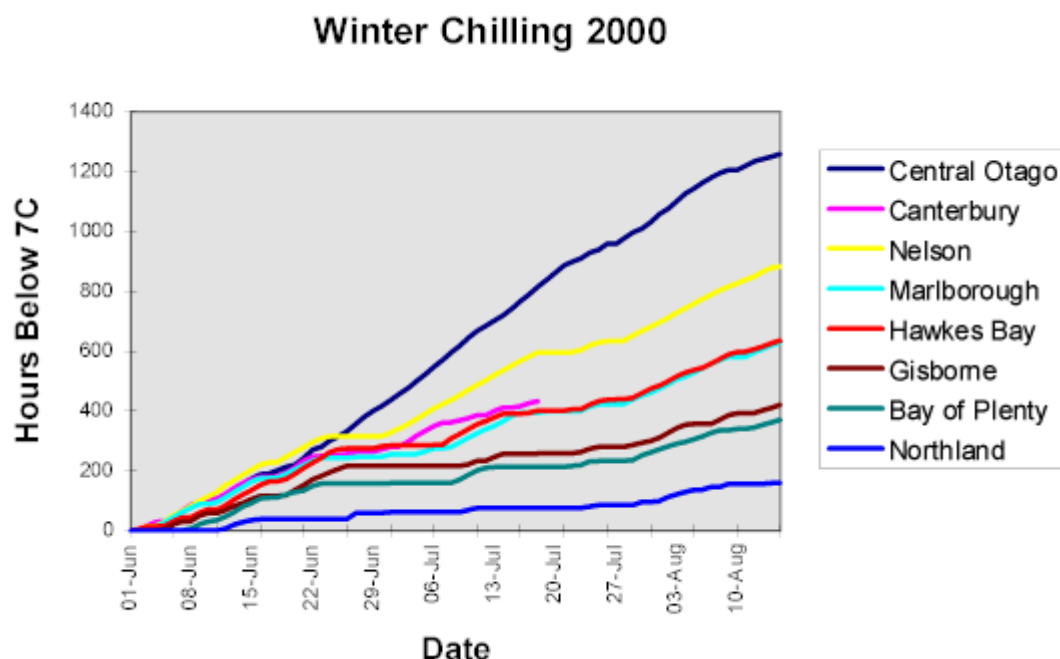
It was with great anticipation that I prepared this month's Weather Sense. Watching winter chilling progress is like watching a horse race unfold in slow motion. We are heading into the home stretch now, and for growers whose crops have a high winter chilling requirement the news is not good for the most part. For this column we used the newly improved chilling calculation features in HortPlus™ MetWatch to summarise data from weather stations around the country. In the following table and bar chart we can see that every district other than Nelson is significantly down on winter chilling from last year - and remember last year was not a high chill winter.

Total Winter Chilling (1 June - 15 August) Hours Below 7°C

Location	1999	2000
Central Otago	1472	1259
Nelson	888	882
Marlborough	770	629
Hawkes Bay	818	634
Gisborne	483	419
Bay of Plenty	559	369
Northland	262	159



The last week of June and the month of July were fairly low in winter chilling for most sites as shown in the following graph. Note how little winter chilling is accumulated during the mid-winter period, especially for the North Island sites. The increase in accumulation of winter chilling at most sites through August will be very appreciated by most growers.



Many of our fruit crops require winter chilling as discussed in previous articles in The Orchardist. Plants receiving less than their optimal chilling requirement typically show symptoms such as delayed foliation, delayed and extended flowering, poor flower quality, reduced fruit set, and even reduced fruit quality.

The following table outlines chilling requirements for a number of common fruit and nut crops. Individual varieties within a species have specific chilling requirements. If you don't already know the chill requirements of your crops ask the nurseryman from whom the planting stock was purchased and they should be able to tell you.

Chill Hour Requirements (hours less than 7°C)

(from Australasian Tree Crops Source Book: <http://www.aoi.com.au/atcros/LM.htm>)

Almond	400-700
Apple*	400-1,800
Apricot*	350-1,000
Blackberry	200-700
Chestnut	400-750
European pear	600-1,500
European plum	700-1,800
Grape	100-500
Kiwifruit*	400-800

Nectarine*	200-1,200
Peach*	200-1,200
Persimmon	100-500
Raspberry*	100-1,800
Sour cherry	700-1,300
Strawberry	200-300
Sweet cherry	600-1,400
Walnut*	400-1,500

*Low-chill varieties exist which need less chilling.