

## Weather Sense

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I have two ways of gauging how the winter is progressing. One is to calculate winter chilling from temperatures recorded on an automatic weather station, the other is to watch my wood pile. So far, my woodpile tells me that it has been a fairly warm winter!

As Andrew Hodson mentioned in last month's Weather Sense, your trees and vines are not just sitting like lumps patiently waiting for Spring. You know from experience that after a colder winter you can expect more flowers, and a more compact flowering period, than after a warm winter. Various techniques have been developed for measuring "winter chilling" which try to measure a plant's response to winter temperatures.

Being able to quantify winter chilling goes from being an exercise of academic interest to extremely useful when management techniques are available to compensate for low chilling conditions. With some crops – kiwifruit is an excellent example – we have excellent management tools to help mitigate the effects of a mild winter. Kiwifruit flower quality, timing, and duration of flowering period are all very strongly affected by a mild winter. HiCane™ (hydrogen cyanamide) can in effect substitute for winter chilling, and artificial pollination widens the scope of options available. However the rate and timing of HiCane application are very much determined by the amount of winter chilling the vines have received so the better the information on winter chilling, the better the decisions on HiCane management.

The HortPlus MetWatch software has the three most popular methods of calculating winter chilling: Hours below threshold temperature, chilling hours, and Richardson Chill Units. We will go into more details on these next month.

In the mean time, the graph and table provide information on the progress of winter chilling for this year. While there is a lot of the winter to go, there are some very obvious differences shaping up between this year and last year for some districts, which if they persist until Spring mean flowering may be a challenging time this year. The variation between districts is very interesting though with areas like Nelson going against the trend and showing slightly higher winter chilling this year than last. Watch this space for the continuing saga of winter chill 2000!

Table: Hours below 7°C (1 June to 17 July)

Location	1999	2000
Northland	158	56
Waikato	357	216
Bay of Plenty	372	212
Gisborne	306	256
Hawkes Bay	461	369
Marlborough	470	394
Nelson	560	581
Canterbury	610	432
Central Otago	918	887

