

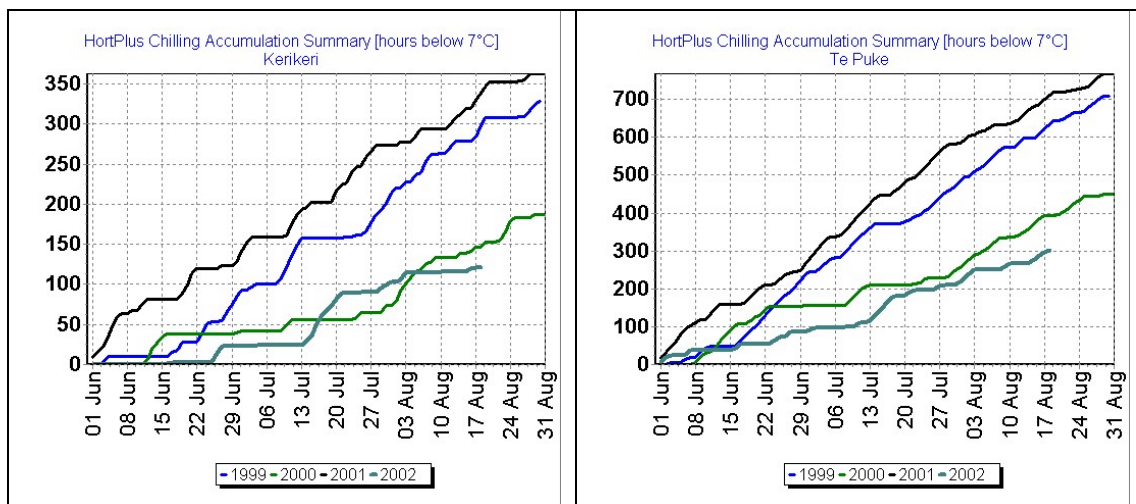
Winter Chilling North vs South  
Dr Trevor Atkins, HortPlus  
Email: trevor@hortplus.com  
Web site: www.hortplus.com

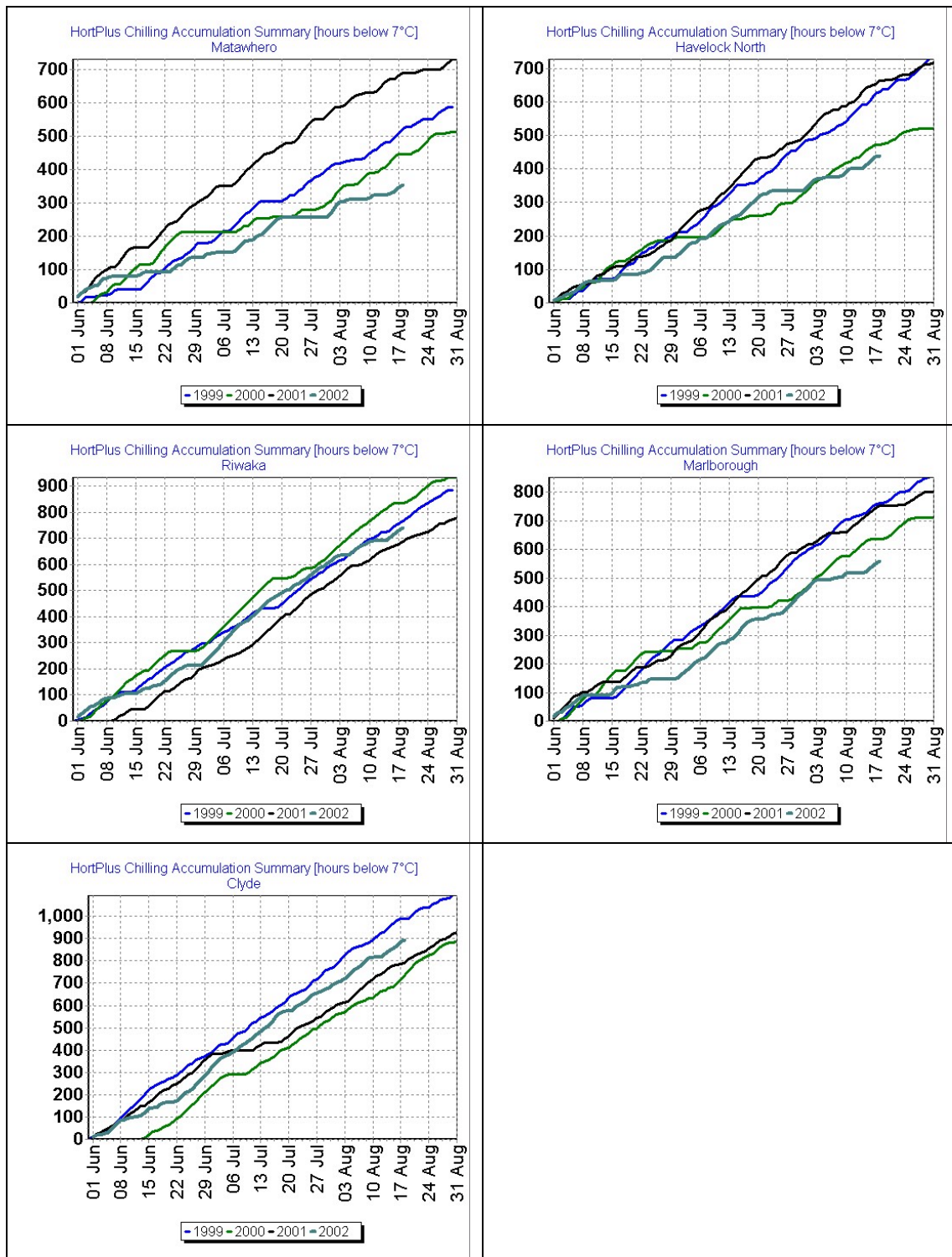
It has been quite a complex year for winter chilling. It almost seems as if a dotted line has been run somewhere between Nelson and Blenheim with areas to the South having a decent winter for chilling, and areas to the North having a decidedly mediocre winter, especially when compared with last winter.

In this month's Weather Sense we look at winter chilling accumulated to the middle of August. Winter chill was calculated and graphed using HortPlus MetWatch software, with data coming from representative weather stations in the network of weather stations covering each of the major growing areas. A comparison of the winter chilling for this season compared with previous winters can be found in Figure 1. Winter chill is shown in Figure as Hours Below 7°C. Trends for Richardson Chill Units are similar but the graphs could not be published due to space limitations (see web site [www.hortplus.com](http://www.hortplus.com) for Richardson Chill Unit graphs).

No matter how it is measured, it has not been a good winter for the accumulation of chilling in the more northern areas. Gisborne and Northland are markedly obvious examples of the lower winter chilling, especially when compared against last winter's excellent chilling.

Figure 1. Winter chill accumulations commencing 1 June.





The lack of winter chill in the more northerly areas is also highlighted in Tables 1 and 2 which give a head-to-head comparison of winter chill accumulation from 1 June to 15 August across the different years and different stations. The right-most column of the table shows the total chill to mid-August of this year as a percentage of chill accumulated over the same time period last year. Northland for example has received only 1/3 to 1/2 of the chilling this year as for the same period last year when expressed as hours below 7°C or Richardson Chill Units respectively. Conversely

southern regions have received even more chilling this winter than last year with Central Otago getting approximately 10% more chilling.

Table 1. Winter Chill (hours < 7°C) 1 June to 15 August.

|                      | <b>1999</b> | <b>2000</b> | <b>2001</b> | <b>2002 (as % of last year)</b> |     |
|----------------------|-------------|-------------|-------------|---------------------------------|-----|
| <b>Northland</b>     | 620         | 442         | 761         | 384                             | 50  |
| <b>Bay of Plenty</b> | 911         | 756         | 1024        | 752                             | 73  |
| <b>Gisborne</b>      | 884         | 764         | 1062        | 625                             | 59  |
| <b>Hawkes Bay</b>    | 902         | 721         | 936         | 696                             | 74  |
| <b>Nelson</b>        | 976         | 1112        | 928         | 1100                            | 119 |
| <b>Marlborough</b>   | 1000        | 1012        | 927         | 918                             | 99  |
| <b>Central Otago</b> | 916         | 766         | 810         | 868                             | 107 |

Table 2. Winter Chill (hours < 7°C) 1 June to 15 August.

|                      | <b>1999</b> | <b>2000</b> | <b>2001</b> | <b>2002 (as % of last year)</b> |     |
|----------------------|-------------|-------------|-------------|---------------------------------|-----|
| <b>Northland</b>     | 279         | 139         | 320         | 116                             | 36  |
| <b>Bay of Plenty</b> | 598         | 372         | 681         | 278                             | 41  |
| <b>Gisborne</b>      | 483         | 423         | 672         | 328                             | 49  |
| <b>Hawkes Bay</b>    | 591         | 456         | 642         | 412                             | 64  |
| <b>Nelson</b>        | 724         | 824         | 664         | 705                             | 106 |
| <b>Marlborough</b>   | 723         | 629         | 720         | 523                             | 73  |
| <b>Central Otago</b> | 949         | 682         | 777         | 854                             | 110 |

You can keep up to date with winter chill accumulations during the winter by visiting the HortPlus website at [www.hortplus.com](http://www.hortplus.com)