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Many growers prefer to have a weather station on their own property although it can be expensive to get the right gear. Ongoing maintenance, calibration and sensor replacement costs can be quite large. There are other options though. Adjustment of temperature values from a regional weather station can be done and is quite stable over time although adjustments during the year need to be made, particularly if you live close to the sea. Sea breezes in summer tend to make properties close to the sea a bit cooler during the middle of the day and slightly warmer at night. This effect is reduced during winter. An example comparison between two places is shown in Figure 1. This figure shows the temperature comparison between Havelock North and Lawn Road in the Hawkes Bay. If you look at 0°C Lawn Road is slightly warmer at night but at 25°C it is a bit cooler

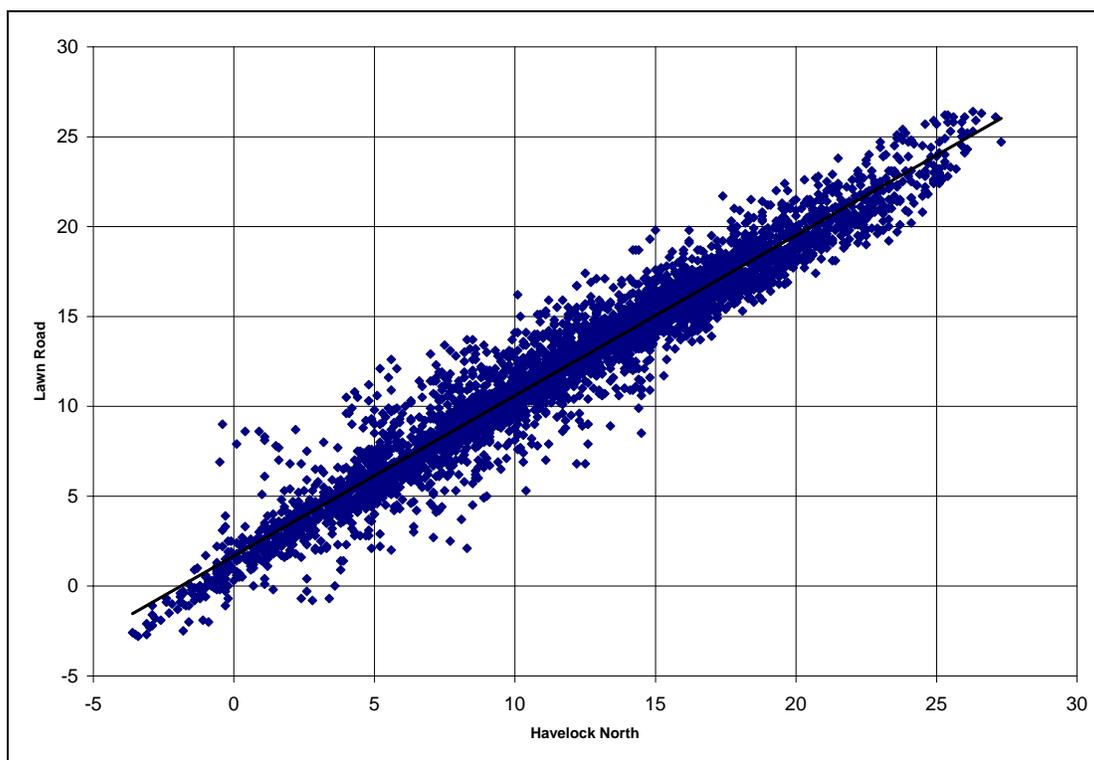


Figure 1 : A temperature comparison

Over the years HortPlus has tried many different types of weather station and the only one that lasts is a Campbell Scientific. For example the logger at Lawn Road has been going since the late 80's and still going strong. Go here for a look at the product range and options available <http://www.scottech.net/> I have yet to hear an unhappy grower who has purchased a Campbell. Also we are still using Campbell Scientific software to call stations that was developed 30 years ago. Can you show me any software that you still use that is 30 years old?

An example station is shown in Figure 2. Typical weather stations for horticulture include sensors for screen temperature, grass temperature, rainfall, humidity, leaf wetness, radiation, wind speed, wind direction and various soil temperatures. All of these sensors can be used for a wide range of tasks including frost warnings, disease risk prediction, irrigation, insect phenology and general weather related comparisons e.g. chill units and growing degree days. Given that your horticultural factory is outside, not having one of these is a crime!



Figure 2 : Sample Campbell Weather Station

If you can't afford a station, maybe you can just use one of the regional stations. Stations available in Hawkes Bay are shown in Figure 3. HortPlus has a network of stations across the country and you can check stations available in your area by going here :

<http://www.hortplusgis.com/spraywatch2/weatherstations/>

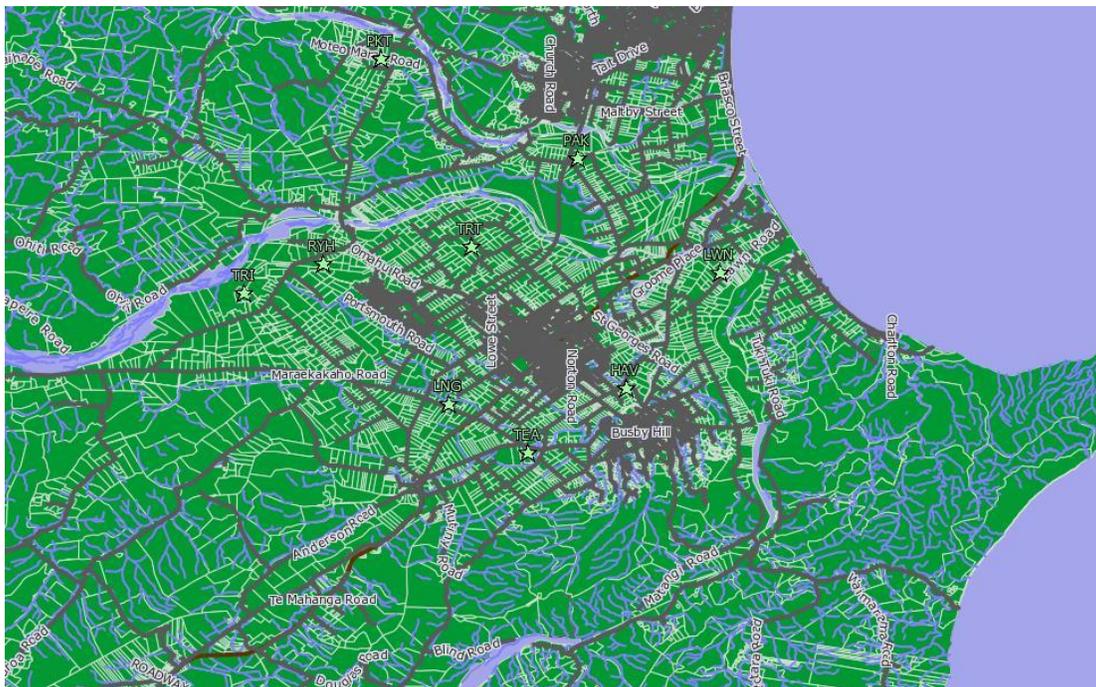


Figure 3 : Hawkes Bay Weather Stations (stars indicate station location)

Using one of these regional sites saves you the cost and hassle of maintenance, sensor replacement and calibration. All of these sites can be accessed via the HortPlus Metwatch Online service or if you are lucky enough to be a pipfruit grower, they will be on the Pipfruit NZ website. There is quite an impressive list of stations in Hawkes Bay but as previously noted, frost risk at your property will vary from your closest weather station. You will need to

know how you how you compare. HortPlus has a range of temperature loggers that can be used for this. Go to <http://www.hortplus.com/> and have a look. These loggers are comparatively cheap and how long you can log for can be calculated in the HortPlus web site. As they can be used multiple times, perhaps several properties can be done or maybe you can do the neighbour too. I am sure they will appreciate the gesture.



Figure 4 : Miniature Dataloggers

You will also need to shield the loggers from direct sunlight by enclosing them in a radiation screen. A screen is shown in Figure 5. These screens were designed and tested by Warwick Henshall of Plant and Food Research and are very easy to use.

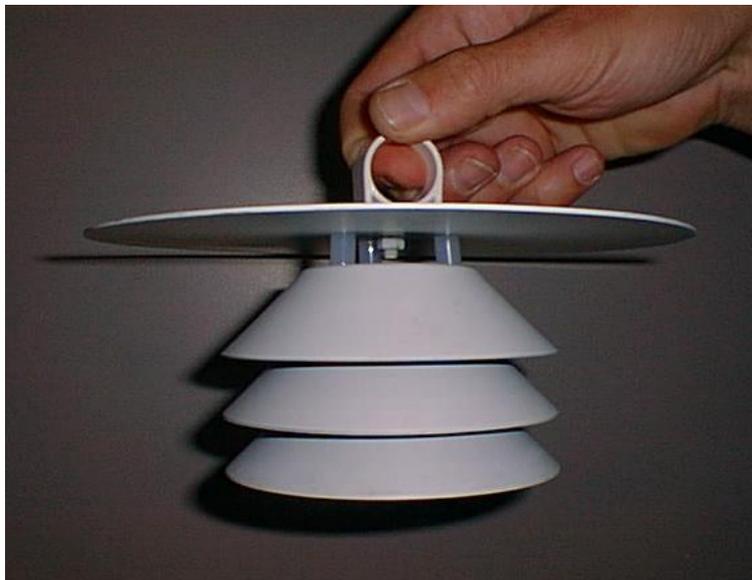


Figure 5 : Radiation Screen

If you would like a free trial of HortPlus Mewatch Online, just send us an email. As always, we are happy to answer any questions you have about weather stations. I almost forgot to mention. Our website at <http://www.hortplus.com/> has been redone. As well as information on the products we sell, there is information on free internet tools available to growers like SprayLog and irrigation data. A fun area is also there containing things we have found over the years. The site contains our contacts details if you need to call or email us. On the top left you can even visit our Australian site. HortPlus has recently established a service there so if you have any friends or colleagues over there, they may be interested in what we can do.