

HEAT RANGER®

Enhancing Your Crop Climate

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Heat Ranger Ready For Sale

After six years of prototypes and testing in frosts in Canterbury and Central Otago for performance and reliability, Heat Ranger is ready for sale!

Frost damage on crops is a major economic loss issue for New Zealand Vineyards with little progress in mitigation procedures in the past forty years. Nothing has changed from wind machines, helicopters, sprinklers and diesel burners, all of which vary greatly in effectiveness.

Heat Ranger demonstrates New Zealand inventiveness and ingenuity in action, leading the world by putting real warm air over the crop, reducing your risks, and putting you back in control.

At Ross Trowsdale's Fiddlers Green vineyard at Waipara in October and November 2015 Heat Ranger overcame severe frost events of -2°C for two hours and -3°C for seven hours, with virtually no crop lost on this ten hectares, a net \$123,000 of the crop saved where other growers struggled.

The photo on the left was taken two and a half weeks after the 5th November frost, when unprotected temperatures were at -3°C at crop height.

The photo on the right shows berries in late March almost ready for harvest



The coverage from the one location is 12 to 20 hectares depending on the site and crop, and compares with three to five wind machines which are less effective, noisy and need resource consents. Helicopters are also noisy and like the wind machines need an inversion layer to be effective, which is often variable or non-existent.

Heat Ranger does not need an inversion layer and uses warm air over the crop to give you a higher level of protection. Nor does it require resource consents and is very quiet at 30 to 54 decibels at 200 metres; well within the Marlborough and Hawkes Bay guidelines.

Leading the Revolution in Climate Management Systems

Global Warming seems to translate into more extremes of hot and cold weather and therefore greater risk. This is not new. When Bruce Koller started growing blackcurrant in Leeston in the year 2000, it was deemed to be a frost free area during the spring months. Nevertheless he always had helicopters on stand-by or working on the 90 hectares. In late October in 2006 there was a -4° frost that wiped out half the crop, despite three choppers going and it repeated in 2007. In 2008 the killer frost was on the 9th of November. This resulted in selling the farm and began the quest for an effective warm air frost management system.

We accept that **seeing is believing**, so we have a machine on grapes at Greystone at Waipara, and another at Bruce Forlong's in the Upper Wairau Valley, Marlborough, where we will be running field days.

If you, or your team want to check one of these out, then we can arrange for you to do so. We want you to be confident enough to give Heat Ranger a go this year. We do not have a machine in the North Island but if you have a serious interest, and want hands on experience, then talk to us.

Even this last growing season, there was a frost around Xmas in the Wairarapa, and another on the 10th March at Waipara which caused issues. With Heat Ranger, you can just go out and turn it on, or have it start automatically.

While this year has seen record high temperatures in April and May, NIWA and Bluesky note the Southern Seas are colder than normal and when the southerlies do arrive there will be snow and frosts again.

Heat Ranger comes with two pallets holding 8x200 litre LPG bottles and four Harvest temperature monitoring masts. We have two models: tractor PTO powered, or motorized, which can be automated.

Capital value is similar to three wind machines for the motorised model and a lot cheaper than sprinklers, with no soil saturation problems. We are raising the temperatures cost effectively with LPG usage for a 6 hour frost about \$100 per hectare and much less than helicopters.

We are aware that your Bankers and Insurers also have an interest in reducing risk in the industry. It is in your and their best interests to have more effective frost protection now that this new technology makes it possible.



Bruce 021 458 029 & Fred 0274 829 982

While marketing in Marlborough in February there was really positive support and appreciation at the operational level, for the investment we have made in Heat Ranger. We hope those who are responsible for capital expenditure and risk management, take the time to see Heat Ranger going as well.

We are aware that the industry is still in growth mode with significant plantings being planned and implemented. Some of these investments include millions of dollars spent on wind machines without any consideration of better options that can extend the level of frost protection. Our technology offers a better option with a higher level of risk protection.

As an executive responsible for maintaining a high level of production from your investment in vineyards, we believe that having Heat Ranger as part of your strategy gives you added strength and options in the reduction of adverse seasonal variability, which means continuity of product supply to your consumers.

Call us today so that we can work with you to get best value for your Climate Management Budget

Leading the Revolution in Climate Management Systems