



Business benefits

- More effective fumigation action
- Zero impact on product quality or post-treatment shelf life
- Lower volumes of fumigant required
- Shorter venting windows for faster export shipments
- Improved environmental performance fits better with company's sustainability policy

VAPORMATE®.

New Zealand strawberries better than ever with innovative fumigation solution from Linde.

The customer

Founded in 1991, Fresh Food Exports Ltd. has expanded its initial persimmon and blueberry orchard to include strawberries and a variety of melons. The company is highly successful, now supplying strawberries to the biggest supermarket chains in the South Pacific and exporting them internationally. The company also exports an extensive range of fresh New Zealand produce such as mushrooms, tomatoes, mung beans, sprouts, salad mixes and herbs in addition to strawberries, blueberries and persimmons. All of Fresh Food Exports' growing and processing facilities fully comply with New Zealand and international food safety regulations. Through New Zealand GAP certification, Fresh Food Exports has put a traceable, accountable value chain in place – extending from crop to customer. The company's mission is to grow and process high-quality produce in a safe and sustainable manner.

The challenge

Strawberries from New Zealand are in very high demand in neighbouring Australia. In the past, the company relied on methyl bromide to meet its fumigation needs and pass pre-shipment inspection. Although methyl bromide is an effective fumigant, it has several drawbacks. Firstly, the fruit must be at ambient field temperature in order to be treated. If the fruit is chilled, it has to be placed outdoors in order to raise its temperature and ensure that any insects are active. In peak season, however, soft fruits are best chilled as soon as they have been packed. The longer the fruit is left at ambient temperature after packing, the higher the rate of breakdown and quality impairment. So raising the fruit to ambient temperatures for fumigation treatment is far from ideal. Secondly, if there is any moisture at all on the fruit, treatment results in serious cosmetic damage – rendering the fruit unexportable in some instances. Thirdly, methyl bromide entailed relatively long venting windows, sometimes delaying the export process overnight. Fresh Food Exports was keen to speed up its value chain.



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Raj Kesha,
Export Manager, Fresh Food Exports

The solution

Fresh Food Exports trialled VAPORMATE on specific strawberry pests to compare its effectiveness with that of methyl bromide. VAPORMATE is an eco-friendly, safe, non-residual way to protect post-harvest and packaged fruit. Its active ingredient – ethyl formate – is a naturally occurring substance with no known ozone depletion or global warming potential. It simply degrades to metabolites that occur naturally in the environment. This makes it an eco-friendly alternative to methyl bromide.

Benefits

The company found that VAPORMATE was more effective in eradicating insects and that lower volumes of it were required. “Essentially, we saw better results with less fumigant when we switched over to VAPORMATE,” says Raj Kesha, Export Manager, Fresh Food Exports.

In addition, VAPORMATE offers quality gains as it has no negative impact on the fruit. Fresh Food Exports could see no evidence of breakdown in the treated strawberries, for instance. Speed is another key advantage.

“VAPORMATE offers faster venting times. So we are able to treat and clear more fruit for export more quickly, thus maximising each shipment,” continues Kesha.

And last but not least, VAPORMATE fits better with the company’s mission to grow and process high-quality produce in a safe and sustainable manner – as it has no known ozone depletion or global warming potential. “Sustainability is a big priority for us and we feel that VAPORMATE is a more environmentally sound way to meet our fumigation duties. It aligns better with our corporate responsibility policy,” continues Kesha.

Looking ahead

VAPORMATE has given Fresh Food Exports new momentum. Its ability to eradicate insects more effectively without compromising quality is giving the company new confidence as it considers increasing its reach in existing and new markets offering attractive returns. “We have seen that fruit treated with VAPORMATE was in excellent condition on arrival in other countries and that the post-treatment shelf life was not compromised,” concludes Kesha.

The company plans to explore the benefits of VAPORMATE for other produce lines that also require pre-inspection fumigation. VAPORMATE is the ideal vehicle to support Fresh Food Exports’ expansion plans as it meets strict phytosanitary certification requirements (confirming that the produce is free of live insects or pests) in the US, Europe and countries such as Australia, Thailand and the Philippines.



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