



Business benefits

- Increased sales volume
- Perfect match for Dole's social responsibility agenda
- Head-start on upcoming climate protection legislation
- Improved quality during storage and distribution of imported fruit by delaying the Maillard reaction

VAPORMATE®.

Dole Korea gets ahead with Linde's innovative fumigation solution.

The customer

Every year, Dole Korea, established in 1991, supplies around 83,000 tonnes of imported fruit to supermarkets and hypermarkets as well as to retail, discount and department stores. This accounts for 30% of total Korean banana imports and a significant share of lemon, orange, pineapple and other fruit imports. To raise awareness of the benefits of a healthy diet among the general public, Dole has been running a banana campaign since 2007 with the motto: "Enjoy a Good Morning taking a Good Morning Banana". All imports must meet the strict safety regulations issued by the Korea Food and Drug Administration (KFDA). Quarantine regulations, for instance, require importers to fumigate all imported fruits at customs-bonded houses.

The challenge

Demand for imported bananas is high in Korea. To meet KFDA fumigation requirements, many importers rely on methyl bromide. Due to the adverse effects of methyl bromide on human health and the environment, however, Korea plans to completely phase out methyl bromide by 2015. This move aligns with the Montreal Protocol on Substances that Deplete the Ozone Layer, which calls for phase-out by 2010 in developed countries and by 2015 in other countries. Given the pending complete ban on methyl bromide, Dole Korea decided to explore alternatives.



“The ultimate goal of any fruit import business is to handle the product in a reliable, sustainable way. VAPORMATE® helps us achieve that because it is environmentally friendly with no known GWP.”

Kim Nam-Kook,
Director of Dole Korea

The solution

Dole Korea quickly discovered that Linde's innovative VAPORMATE solution offered a number of benefits over 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

VAPORMATE is a more effective, faster-acting fumigation method, helping to preserve the quality of fruit during storage and distribution. It also contributes to more favourable working conditions as it eradicates insects efficiently with less adverse health effects than methyl bromide. “At Dole Korea, we increased our sales volume by switching from methyl bromide to VAPORMATE,” says Kim Nam-Kook, Director of Dole Korea. He adds that: “VAPORMATE also improves quality during storage and distribution of imported fruit by delaying the Maillard reaction relative to methyl bromide.”

Kim concludes that: “The ultimate goal of any fruit import business is to handle and distribute the produce in a reliable, sustainable way. Unlike methyl bromide, VAPORMATE helps us achieve that goal because it is an environmentally friendly fumigant with no known global warming potential. This makes it the perfect match for our company's social responsibility agenda.”

Looking ahead

Linde Korea is proud that VAPORMATE is helping Dole Korea to eradicate insects while maintaining the original quality of its fruit imports. Given the additional comparative advantages of VAPORMATE over competitive methods, Linde expects VAPORMATE to be extended to other fruits in the near future.



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