

Caution urged in storing methyl bromide-treated produce

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Operators of facilities that store or process crops treated with methyl bromide should take extra precautions to protect their workers from postharvest exposure to the fumigant, advise experts at UC Davis, the California Department of Pesticide Regulation and the federal Centers for Disease Control and Prevention.

The researchers investigated the first reported illnesses in the United States due to [methyl bromide](#) exposures occurring in areas where produce that had been treated elsewhere with the [fumigant](#) was being stored. The U.S. [Centers for Disease Control and Prevention](#) published the experts' findings in the July 15 issue of *Morbidity and Mortality Weekly Report*.

“We urge doctors and other health professionals to consider possible occupational and environmental exposures when they are diagnosing workers who may have been exposed to fumigants,” said report co-author Michael O’Malley, a physician and researcher at UC Davis’ Center for Health and the Environment. “Likewise, it is important that workers who might be exposed to fumigants be informed of the health hazards that are related to these pesticides.”

Methyl bromide is a colorless, odorless, toxic gas. In agriculture, it is used primarily for soil fumigation and to kill pests in harvested fresh produce. It is being phased out of use because studies have shown that it contributes to the destruction of the Earth's ozone layer.

The research team's recommendations resulted from the investigation of a 2010 case, in which two men became ill after they were exposed intermittently over several months to methyl bromide as they inspected the quality of fresh grapes inside a refrigerated storage unit operated by a Southern California produce shipping company. The grapes, imported from Chile, had previously been treated upon arrival at the Port of Long Beach with methyl bromide, as required by the U.S. Department of Agriculture to prevent invasion by the Chilean false red mite.

Both men developed disabling neurologic symptoms, including difficulty walking, dizziness and difficulties with concentration. Blood tests revealed they had elevated serum bromide levels. Subsequent air sampling in the cold-storage facility where they worked detected elevated levels of methyl bromide that exceeded the eight-hour exposure limits.

The men reported their symptoms in February and March of 2010, and by September of that year both had fully recovered.

To prevent such post-fumigation exposures in the future, the researchers suggests that produce handlers increase the time that the fumigated produce is aired out, reduce packaging that might absorb the fumigant or limit aeration, change the way pallets are stacked to improve air flow and reduce required methyl bromide application rates. They also advised that facilities that store methyl bromide-fumigated produce should monitor the methyl bromide levels in the air.

Provided by University of California

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