

Pesticide application as potential source of noroviruses in fresh food supply chains

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Human norovirus (hNoV), also known as the winter vomiting bug, is one of the most common stomach bugs in the world. The virus is highly contagious, causing vomiting and diarrhea, and the number of affected cases is growing. Currently there is no cure; sufferers have to let the virus run its course for a few days.

The consumption of fresh produce is frequently associated with outbreaks of hNoV but it remains difficult to identify where in the supply chain the virus first enters production.

A new study, published in the *International Journal of Food Microbiology* investigated whether [contaminated water](#) used to dilute pesticides could be a source of hNoV. Farmers use various water sources in the production of [fresh fruits and vegetables](#), including well water and different types of surface water such as river water or lake water – sources which have been found to harbour hNoV.

To test this theory, eight different pesticides were analyzed in the study; each was diluted with hNoV contaminated water. The researchers tested whether traces of the virus were present in the samples after the two elements were combined. Results showed that the infectivity of the [norovirus](#) was unaffected when added to the pesticide samples. In other words: pesticides did not counteract the effects of the contaminated water.

The authors conclude that the application of pesticides on fresh produce

may not only be a chemical hazard, but may in fact also be a microbiological risk factor; both having consequences on public health.

More information: This article is "Persistence of human norovirus in reconstituted pesticides—Pesticide application as a possible source of viruses in fresh produce chains" by Katharina Verhaelen, Martijn Bouwknegt, Saskia A. Rutjes and Ana Maria de Roda Husman ([DOI: 10.1016/j.ijfoodmicro.2012.11.007](https://doi.org/10.1016/j.ijfoodmicro.2012.11.007)) and appears in *International Journal of Food Microbiology*.

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