

University of Washington Studies of Asthmatic Children in the Lower Yakima Valley.

This study provides evidence that PM_{2.5} in an agricultural setting contributes to elevated asthma morbidity.

Loftus, C., Yost, M., Sampson, P., Arias, G., Torres, E., Vasquez, V. B., ... & Karr, C. (2015). Regional PM_{2.5} and asthma morbidity in an agricultural community: a panel study. *Environmental research*, 136, 505-512. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4425279/>

Ammonia concentrations were elevated in this community and strongly predicted by proximity to animal feeding operations. Ammonia's association with acute lung function decrements in children with asthma in the surrounding community may be causal or, alternatively, ammonia may be a marker for other pollutants from animal feeding operations associated with respiratory effects.

Loftus, C., Yost, M., Sampson, P., Torres, E., Arias, G., Vasquez, V. B., ... & Bhatti, P. (2015). Ambient ammonia exposures in an agricultural community and pediatric asthma morbidity. *Epidemiology (Cambridge, Mass.)*, 26(6), 794. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4587379/>

Our findings indicate that children with asthma may experience short-term respiratory effects following increased exposure to airborne AFO pollutants, adding to a growing body of research evidence that AFO-related air pollution may cause community-level health effects.

Loftus, C. (2015). *Industrial Animal Agriculture in the Yakima Valley, Air Pollution, and Pediatric Asthma Morbidity* (Doctoral dissertation). Available at https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/26152/Loftus_washington_0250E_13499.pdf?sequence=1