

Perspectives on the Public Health Effects of Concentrated Animal Feeding Operations
Missouri Department of Health and Senior Services

November 12, 2009

- To date, a review of scientific literature by the Missouri Department of Health and Senior Services has not documented conclusive evidence that concentrated animal feeding operations (CAFOs) are a source of infectious, contagious, or communicable disease to surrounding communities. However, some studies have indicated that:
 - Quality of life can be affected by odors from CAFOs¹;
 - Preexisting respiratory problems in persons living in a surrounding community may be exacerbated²;
 - Persons in surrounding communities have self reported adverse health effects³ but these claims have not been independently verified by medical staffers;
 - Some leaking CAFO lagoons have contaminated private drinking water wells and on and off-site monitoring wells^{4,5,6};
 - Some persons occupationally exposed have developed toxic and inflammatory health conditions, such as respiratory problems, headaches, eye irritation and nausea^{7,8}.
- On the state and federal levels, the Missouri Department of Natural Resources and the United States Environmental Protection Agency have regulatory authority for CAFOs in order to mitigate their associated risks to air and water quality.
- Based on the review of research findings and existing regulations regarding CAFOs conducted by the Missouri Department of Health and Senior Services, at this time it does not appear that additional local ordinances regulating odor emissions from CAFOs will enhance the physical health of the public in surrounding communities.
- At the national level there has not been clear agreement on what public health actions, if any, should be taken concerning CAFOs, given the current scientific literature:
 - A resolution by the American Public Health Association in 2003 urged federal, state and local governments and public health agencies to impose a moratorium on new CAFOs until additional data on the risks to public health have been determined⁹.
 - The federal Centers for Disease Control and Prevention (CDC), however, has not called for a moratorium. Instead, CDC supports continued studies of possible human health effects associated with CAFOs¹⁰.
 - The 2008 report of the PEW Commission on Industrial Farm Animal Production states our understanding of how IFAP affects humans, animals and society must be expanded. Recommendations made include enforcing existing laws, regulations and standards; updating or enacting new regulations; developing, setting and enforcing standards; developing and providing training programs for workers; and conducting more publicly funded research. The Commission has concluded that a more diversely funded, well-coordinated and transparent national research program is needed to address the many problems and challenges facing IFAP.¹¹

- The Missouri Department of Health and Senior Services believes that in order to more completely understand the risk of adverse health effects being caused by exposure to substances emitted from CAFOs, biomonitoring studies (the collection and analysis of chemical and biological samples from humans or data regarding physiological changes in humans) will be necessary.
- The Missouri Department of Health and Senior Services will continue to review on-going and future studies/research related to CAFOs (such as the biomonitoring studies described above) in order to identify potential public health impacts in a timely fashion.

References

1. Wing, S., Wolf, S. *Intensive livestock operations, health and quality of life among Eastern Carolina residents*. Environmental Health Perspectives 2000; 108:233-238.
2. Public Health Concerns for Neighbors of Large-Scale Swine Production Operations <http://asae.frymulti.com/abstract.asp?aid=8430&t=2>
3. Schusterman, D. *Critical review: The health significance of environmental odor pollution*. Archives of Environmental Health, 1992; 4:76-87.
4. Rudo, Kenneth. Groundwater Contamination of Private Drinking Well Water by Nitrates Adjacent to Intensive Livestock Operations (ILOs). Presentation August 25, 1998.
5. Antibiotic-Resistant Enterococci and Fecal Indicators in Surface Water and Groundwater Impacted by a Concentrated Swine Feeding Operation, Spakota Amy R., Curriero Frank C., Gibson Kristen E., Schwab Kellogg J., Environmental Health Perspectives 115:1040-1045, July 2007.
6. Monitoring and Source Tracking of Tetracycline Resistance Genes in Lagoons and Groundwater Adjacent to Swine Production Facilities over a 3-Year Period. S. Koike, I.G. Krapac, H.D. Oliver, A.C. Yannarell, J.C. Chee-Sanford, R.I. Aminov, and R.I. Mackie. Applied and Environmental Microbiology, Aug. 2007 p. 4813-4823
7. Institute for Agriculture and Trade Policy – Food and Health Program Concentrated Animal Feeding Operations: Health Risks to Farmers and Workers <http://www.environmentalobservatory.org/library.cfm?refID=37389>
8. Human Health Effects of Agriculture: Physical Diseases and Illness http://www.uic.edu/sph/glakes/agsafety2001/papers/kirnhorn_schenker.htm
9. American Public Health Association. Association News, Policy Statements 2003-07: Precautionary Moratorium on New Concentrated Animal Feed Operations. www.apha.org/legislative/policy/2003/2003-007.pdf

10. Centers for Disease Control and Prevention. Programs in Brief: Environmental Health, Concentrated Animal Feeding Operations. Atlanta: US Department of Health and Human Services; 2006. www.cdc.gov/programs/environ06.htm
11. Putting Meat on the Table: Industrial Farm Animal Production in America, Report of the PEW Commission on Industrial Farm Animal Production. PEW Charitable Trust and Johns Hopkins Bloomberg School of Public Health, 2008. http://www.ncifap.org/_images/PCIFAPFin.pdf