

Air Emissions and Occupational and Public Health

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Andrew Maslow⁸ introduced his theory of human motivation in 1943, which suggests that people must first achieve very fundamental needs before attention and progress can be made on higher needs. Applying this to businesses, this author's observation (KJD) is that the focus of most businesses is on making a short term profit, and higher needs such as worker and environmental health impacts of the business are often not in immediate focus of the management. Modern agriculture is considered a business, like any other business by the public and regulatory agencies as highlighted by the recent (August 27, 2010) recent egg recall from farms in the Midwest because of probable *Salmonella enteritidis* contamination. These shifts of increased public scrutiny suggest agricultural businesses need to think beyond the immediate bottom line of profits for long term sustainability.

Andrew Savitz¹² has proposed a new model for long term sustainable businesses that can be well suited to agriculture. Savitz promotes the concept of a "triple bottom line" for long term sustainable businesses. The triple bottom line integrates on equal footing, three building blocks; health people (workers and public), healthy planet, and healthy profits. Although some progress is being made in the people and planet building blocks of Savitz's model, our consumers will continue to demand more attention to these factors even as progress is made. We need to recognize that production agriculture is a dynamic industry as are global economic forces and new issues arise regularly, challenging the balance of the profit, people, and planet building blocks. Our agricultural enterprises must be nimble in the environment to create and maintain a healthy "triple bottom line" for long term sustainability.

This paper will briefly review the issues of air quality in and around livestock operations, and the challenges this has created for the people and planet component of the triple bottom line. The paper will then focus more closely on two recent areas of research; specifically work tasks in swine production and increase dust exposures for workers, and methicillin resistant *Staphylococcus aureus* (MRSA)