



## **Bion Responds to Food Safety Issues**

June 15, 2011. New York, New York. Bion Environmental Technologies, Inc. (OTC: BNET). Food safety concerns have been in the news again with the recent account of an outbreak of deadly E. coli in Germany, initially identified as coming from bean sprouts. In the Sunday June 12<sup>th</sup> edition of the NY Times, an article by Elizabeth Rosenthal titled “E. Coli Fallout: My Health, My Salad” directly addressed this issue.

Although E. coli is generally associated with animal rather than vegetable products, the NY Times article correctly demonstrates how the two are linked: *“since E. coli live in the guts of mammals, farm animals and fresh vegetables are normally kept far apart to prevent contamination. Risk exists every time that separation breaks down”* and as a result *“large vegetable purchasers will reject produce from fields that have been recently flooded...”* Produce from ‘flooded fields’ is avoided because, as the article continues, *“...the risk of E. coli contamination is generally higher where organic material (like cow manure) is used as fertilizer...”*

While “E. Coli Fallout: My Health, My Salad” is primarily focused on the recent E. coli outbreak in Germany, food safety remains a critical concern in the United States. According to the Centers for Disease Control and Prevention every year at least 76 million cases of food-borne disease occur in the U.S. Food tainted with dangerous bacteria and other pathogens such as E. coli and salmonella results in the hospitalization of 325,000 and the death of 5,000 people each year.

Food safety concerns regarding pathogen contamination are directly addressed by a unique technology developed by Bion Environmental Technologies. Bion’s patented micro-aerobic livestock waste treatment process not only significantly reduces the environmental impacts to air and water from livestock waste, it also addresses contamination by E. coli and other pathogens in four primary ways:

- 1) Prevention of pathogenic growth in the first place;
- 2) Reduced antibiotic usage that lessens the potential for development of antibiotic-resistant strains;
- 3) Destruction of pathogens within the intensive biological treatment process; and
- 4) Further removal by well-managed liquid effluent application to soil-crop systems

A primary basis for pathogen growth and the resulting transmission of disease in confined livestock operations is the lack of cleanliness typically found in these high density environments. Disease pressures are the direct result of the mud and manure mixture typically found at large feedlot facilities. Such management systems lead to a high potential for breeding disease and subsequent pathogen transfer. These traditionally unsanitary conditions have led to the widespread use of non-therapeutic or prophylactic antibiotics as standard operating procedure in most large-scale livestock operations.

The manure management system employed by Bion, on the other hand, will provide an environment sufficiently clean that non-therapeutic use of antibiotics will be significantly reduced, if not entirely eliminated, while maintaining robust animal health. Bion's waste treatment process incorporates the frequent removal of wastes from housing facilities designed to support such collection and to shelter animals from the elements. This results in dry, clean and comfortable animals with low potential for pathogens or pathogen growth. Additional benefits include improved animal health due to lowered stress from other factors, including adverse weather conditions and exposure to ammonia and other noxious gases, resulting in reduced need for antibiotic usage.

Once the manure has been removed from the animal housing unit, Bion installations subject the waste to intense biological treatment. While removing polluting nutrients (nitrogen and phosphorus), the waste is exposed to high concentrations of active beneficial bacteria that reduce the levels of pathogenic bacteria in the livestock waste stream. Destruction of pathogens achieved by the Bion treatment system is anticipated to be three to six orders of magnitude (99.9% to 99.9999%, or three to six log kill) depending on the specific system design that is installed.

Environmental impacts from livestock agriculture are not sustainable. One need look no further than nitrogen loading to the Chesapeake Bay, dead zones in the Gulf of Mexico and the numerous documented occurrences of hypoxia throughout the world linked to excess nutrient loading. Based on current environmental impacts from livestock operations in the Chesapeake Bay, downstream municipal and stormwater remediation for nitrogen alone results in public costs greater than the economic value of the livestock production activities that produce that nitrogen loading.

As the world moves toward the year 2050, with an estimated population of 9.3 billion, fundamental changes in agricultural policy and practice will be required to provide safe and nutritious food to our burgeoning population, while maintaining the integrity of the environment that sustains us. Those changes must include better management of livestock waste, which, although it is an important agricultural resource, has recently been identified as the source of several critical environmental and health issues. Bion's micro-aerobic treatment technology provides a pathway to bridge the gap between economic need and environmental sustainability.

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About Bion: Bion Environmental Technologies has provided environmental treatment solutions to the agriculture and livestock industry since 1990. Bion's patented next-generation technology provides a unique comprehensive treatment of livestock waste that achieves substantial reductions in nitrogen and phosphorus, ammonia, greenhouse and other gases, as well as pathogens, hormones, herbicides and pesticides. Bion's process simultaneously recovers cellulosic biomass from the waste stream

Bion recently installed a dairy waste treatment system at Kreider Dairy Farms, a 1,200 cow dairy facility in Lancaster County, Pennsylvania. The system was installed to reduce ammonia emissions and nitrogen discharges that impact the Chesapeake Bay. Bion will be reporting initial data on its environmental performance beginning in the next few weeks. The data will be used by the Pennsylvania Department of Environmental Protection to verify nitrogen reductions that will be used as offsets to EPA Chesapeake Bay Total Maximum Daily Load requirements. For more information, see Bion's websites, [www.biontech.com](http://www.biontech.com) and [www.bionpa.com](http://www.bionpa.com).

*This material includes forward-looking statements based on management's current reasonable business expectations. In this document, the words 'expect', 'will', 'proposed' and similar expressions identify certain forward-looking statements. These statements are made in reliance on the Private Securities Litigation Reform Act, Section 27A of the Securities act of 1933, as amended. There are numerous risks and uncertainties that could result in actual results differing materially from expected outcomes.*

Contact information:

Craig Scott  
Vice President-Capital Markets  
303-843-6191 direct