

Response to Lidia Epp Blog

Mother Earth News

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By Don Gardner, DVM

Bedford County, Virginia

I only recently became aware of the blog posts that Ms. Lidia Epp has been posting on motherearthnews.com.

I've read them all – and it appears that Ms. Epp's blogs are based on her unquestioning acceptance of unsupported and unscientific claims about biosolids that circulate on the Internet. She appears to have completely ignored the overwhelming evidence – the decades of research, the practical experience of farmers and engineers – all also documented on the Internet – and in prestigious peer-reviewed journals and other scientific reports.

As someone familiar with *Mother Earth's* publications, I am also disappointed in the publication itself, which has allowed this crap – and I use that word carefully – to continue. *Mother Earth* warns bloggers to “be especially careful about making any health claims. Unless you're citing the original, credible science that supports your allegations of health benefits, avoid making such claims.”

In her blogs, Ms. Epp uses such pejorative terms as “environmental disaster,” cites second and third hand health claims that have often been investigated and found unsupported, and packs erroneous claims in sentence after sentence, such as: “The *community falls apart*, people move out, and the *land became worthless*. Not just worthless – *dangerous to the wellbeing of its owners*. It takes about two thousand years for the Earth to produce an agricultural soil. *It takes just a few applications of human and industrial waste to destroy it.*”

Ms. Epp cites no evidence for these claims. She can't, because it doesn't exist. I know – I've researched biosolids and know the program well in Virginia – her home state. Her statements appear especially outrageous when one considers the fact that approximately 60% of the wastewater solids produced in the U.S. – including from cities like Seattle,

San Francisco, Denver, Dallas, Oklahoma City, Chicago, Boston, and Washington – are recycled to soils on thousands of farms and other sites – and have been for decades.

As a large animal veterinarian and farmer, I conducted my own review of research on biosolids before I decided to apply it on my land. I have been applying biosolids for many years now, and I am convinced of its safety and its many benefits.

I've been a vet for over 40 years, and I've worked very hard during that time to create an economic and environmentally sustainable agriculture operation. I raise very high-quality dairy heifers.

I've struggled for years to understand how some people can become such vehement opponents of biosolids in the face of such overwhelming science. I have slowly come to understand that there are a number of factors that fuel such opposition. In Virginia, some of the opposition to individual applications of biosolids is sparked by people who have recently moved into rural farming communities from urban areas and experience normal farming operations as nuisances – dust, noise, and odors. Yes, I know that some biosolids generate odors. But many of our newer neighbors develop understanding of the tradeoffs of country living and work with the farming community.

As a farmer, someone who cares greatly about the environment of my farm, I take exception to being lectured about what I put on my farm. In my experience, farmers as a whole regard themselves as stewards of their land, and we have a practical commitment to protecting an environment that has provided sustenance for generations. Many of the farms here in Virginia have been sustainably farmed for hundreds of years. And yes, many of these historic farms and the farmers who manage those lands choose to use biosolids.

For some farmers in Virginia and in other states, biosolids can be the difference between succeeding as a family business or not.

Finally, there seems to be considerable hostility to business and government among some people – like Ms. Epp – that makes them receptive to conspiracy theories about supposed collusion between business, government at all levels, and academics – a conspiracy to hide the dangers of biosolids. That's absurd. The large majority of university researchers across North America who have studied biosolids find their application to land represents minimal risk. Two National Academy of Sciences reviews

found biosolids applied in accordance with regulations to be acceptable. And so many individual public servants in municipalities around the world have chosen to recycle biosolids. Can all these people be part of some conspiracy?

I have experienced this conflict between farmers and neighbors in my own Bedford County, Virginia. But I have also found that it doesn't have to be this way. People *can* decide to listen to each other. Rather than talking past each other, people can learn from each other and accommodations can be made...if they agree to look at the facts and push emotion aside.

My hope is that Ms. Epp and the readers of *Mother Earth News* will take a serious look at the great body of scientific evidence supporting the safety of biosolids. I hope you will take the time to become familiar with the regulations that were mandated over the years, in whatever state you live. Ironically, in Virginia, biosolids applications receive more attention than any other program – water, waste or air – all paid by program fees established by the Virginia General Assembly. Biosolids are the most regulated and watched farming practice in the Commonwealth.

One last matter – Ms. Epp refers in her blog to “sludge.” Biosolids are not sludge, which is untreated. Biosolids are the result of systematic treatment and testing to ensure they are safe.

As I mentioned, there is a great body of research available demonstrating the safety and benefits of biosolids. But, of course, few of us want to spend hours on Google Scholar poring through thousands of academic papers. Fortunately, other respected groups and individuals have surveyed the literature for us.

In 2007, the Virginia Department of Health published a study by three respected epidemiologists that represented an exhaustive review of the current scientific literature about biosolids and human health. The primary conclusions were as follows: “... *there does not seem to be strong evidence of serious health risks when biosolids are managed and monitored appropriately. Human health allegations associated with biosolids usually lack evidence of biological absorption, medically determined human health effects, and/or do not meet the biological plausibility test.*”

In 2014, this study was updated to review the literature after 2008. In a memo to the director of the DEQ, the director of the Office of Epidemiology in the Virginia

Department of Health concluded that DEQ training of land appliers was adequate and that “land application regulations appear currently protective of public health when applied appropriately.” The director also reported that the updated review of scientific literature “...did not find any causal associations between exposure and adverse effects.”

My experience as a farmer and user of biosolids has been that many people, when they have an opportunity to calmly consider the facts and learn about biosolids, conclude that their use is a win/win for everyone—for the farmers who apply biosolids to their land, for their neighbors who want to preserve the rural nature of their communities, for the environment, for public safety, and for the citizens of the municipalities that use this method of responsibly recycling a valuable resource.

I don't know whether this will be helpful to your readership or not. However, my intent is to speak for the thousands of farmers, tree farmers, and others who work with facts, understand the research, and utilize biosolids in a way that sustains their respective farms.

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Don Gardner, DVM, graduated from the Oklahoma State University College of Veterinary Medicine in 1970 and has been a practicing veterinarian for 46 years. He and his wife Susie, also a veterinarian, own Gardner Heifers, Inc., a family farm that develops high-quality dairy replacements. Located in Central Virginia's Bedford County, their farm has been rated as a 5-Star Dairy Heifer Grower by the Dairy Quality Assurance Center, Inc., an independent non-profit veterinary-certified quality assurance organization. The farm received the Virginia Conservation Farm of the Year award in 2003. Dr. Gardner was voted as the Bovine Practitioner of the Year in 2011, and received the Virginia Veterinarian of the Year award in 2015. Dr. Susan Gardner is both a farmer and also served as Director of the Lynchburg Regional Department of Agriculture and Consumer Services Laboratory.