

Ladies and Gentlemen, Members of this Task Force and Guests,  
Thank you for the opportunity to share these comments with you today. My name is Forrist Lytehaause and I'm the Research Director of the Health and Wellness Research Institute though today my comments are as a private citizen of the state of Oregon.

The purpose of my comments today is to bring to your attention a class of alternative methods of reducing emissions that began to be implemented in the 1980's. Since that time these methods have spread to over 130 countries including the United States. There are several manufacturers of these methods in the United States. I'm personally aware of six of them. There are certainly others. The particular method employed by each of the manufacturers varies but they are all coming from the same understanding of what is needed to solve this problem. I will speak more of this in a moment.

But before I do so, I would like to quote the biologist Lynn Margulis, a Professor at the University of Massachusetts Amherst and author of certain currently accepted landmark theories. In an article published in 1993 titled Microbial Microcosm, she states, "All life on Earth today derived from common ancestors. The first to evolve yet the last to be studied in detail are bacteria. Scientists have now discovered that bacteria not only are the building blocks of life, but also occupy and are indispensable to every other living being on Earth.

Later in the article it states, "In the first two billion years of life on Earth, bacteria the only inhabitants continuously transformed the planet's surface and atmosphere and invented all life's essential, miniaturized chemical systems. Their ancient biotechnology led to fermentation, photosynthesis, oxygen breathing, and the fixation of atmospheric nitrogen into proteins.

Bacteria survived these crises because of special abilities that other life forms lack and that add whole new dimensions to the dynamics of evolution. First, bacteria routinely transfer their genes to bacteria very different from themselves. The receiving bacterium can use the visiting, accessory DNA (the cell's genetic material) to perform functions that its own genes cannot mandate. Bacteria can exchange genes quickly and reversibly.

Unlike other life forms, all the world's bacteria have access to a single gene pool and hence to the chemical prowess of the entire bacterial kingdom.

This extreme genetic fluidity makes the very concept of *species* of bacteria meaningless. The result is a planet made fertile and inhabitable for larger life forms by a worldwide system of communicating, gene exchanging bacteria.

Bacteria also have a remarkable capacity to combine their bodies with other organisms, forming alliances that may become permanent. Fully 10 percent of our own dry weight consists of bacteria, some of which like those in our intestines that produce vitamin B12 we cannot live without.” This ends my quote.

The solution to air quality issues caused by dairies, indeed those caused by all CAFO situations lays in an understanding of how to nourish the beneficial microorganisms so that they may do the job that these beneficial microbes are designed to do. These important microbes are more than bacteria as they include certain yeasts and fungi as well.

You are likely asking yourself, why if what I'm sharing is true, has knowledge of this solution not being more widely deployed. I've asked myself the same question. In fact, last November I went to Christchurch New Zealand as a delegate attending the Global Greenhouse Gases and Animal Agriculture conference so that I may listen to many of the world's leading scientists as they presented the results of their various studies. I was disappointed to learn that they had no solutions or even near solutions, and none of them even discussed the role beneficial microbes may play in solving these urgent problems.

To the best of my understanding as a lay person, the problem seems to be that these microorganisms are too complex to properly study using our current scientific paradigm. Generally, these microbes do not cooperate as they work in synergistic groups known as consortia and many of them resist cultivation in a laboratory. The result is that scientists have been unable to duplicate in lab settings what they can witness in practice on farms

throughout the world. In medicine, evidence based research has evolved to study promising solutions where the method of action is not understood.

In closing, I want to offer to dialogue with the appropriate Task Force members. While I am only a citizen and do not come as a credentialed scientist, an experienced dairyman or farmer, I can say that I did personally visit a 600 cow dairy in California last summer where there were no offensive odors, no ammonia and few flies. The dairyman who has been using one company's product for nearly 4 years reported that his cows were healthy with virtually no sign of mastitis or hoof rot. He is now consistently being paid bonuses from his creamery due to the high quality of his dairy's milk. Over the last few years, through the use of his compost and lagoon water on his fields, he was now experiencing record yields of oats and corn. In fact, while I was there, I asked him to break off an average corn stock for a picture. It measured thirteen and one-half feet. All grown in blow sand for soil.

During the course of my research, I have learned of large organic farm in Washington not far from Boardman which is successfully employing methods based on the understanding of beneficial microbes.

Thank you for your attention and I'm hopeful that the appropriate members will approach this topic with an open mind. If so, I feel certain you will discover an excellent, ecologically sound solution that nourishes all aspects of a dairy's operation.

Submitted by Forrist Lytehaause

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**From:** Bamcginnis  
**Sent:** Tuesday, January 22, 2008 12:06 PM  
**To:** dairytaskforce  
**Subject:** Dairy Air

I certainly hope you are able to cleanse the air in Tillamook County. It seems to me since fishing & logging are no longer as viable an income that the tourist trade would be welcome. The odor on some warm summer days is nauseating due to the dairy farmers spreading manure. I know of one farmer who spreads his on Sunday's exclusively and I think it's because he knows the DEQ is not doing field trips on those days. This is a sure way to ruin a picnic or BBQ. Sometimes the manure is spread at night for the same reason and one cannot sleep with the window open.

I think that olfactometers should be placed in various offending locations and fines be collected for excessive odor.

I hope the methane manure digester program is expanded as I understand the odor is reduced by this method and we could use the energy.

Maybe dairy farmers are so used to that horrific odor that they no longer smell it but that is no consultation to the retirees or tourists.

Thank you, Barbara McGinnis

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## **Comments for the Oregon Dairy Emissions Task Force**

**1/23/08**

**Ivan Maluski – Conservation Coordinator, Oregon Chapter Sierra Club**

The Oregon Chapter Sierra Club has roughly 24,000 members in Oregon, residing in all parts of the state. We are interested in the work of this task force and intend to monitor its progress and provide input if necessary.

We worked on SB 235 last session and we are glad to see the state proactively addressing these issues. The Sierra Club has been involved in CAFO issues around the country, and we have experience working with diverse constituencies including small farmers, rural residents, labor unions, and the National Farmers Union to address environmental, quality of life, public health and economic issues associated with factory farms.

We urge the task force to make use of existing research and experiences learned in other parts of the country where states have taken steps to address air quality issues associated with large CAFO's. There is value in looking at how other states are addressing these issues including places such as Minnesota, North Dakota, California and elsewhere. We should take advantage of lessons learned elsewhere, and avoid reinventing the wheel.

Additionally, it should be made clear that the Sierra Club believes the primary issue is brought about by large concentrations of animals and their manure in close confines, not with small farms. We urge the task force to develop specific recommendations related to reducing hydrogen sulfide, ammonia, methane (a significant greenhouse gas) and other harmful air pollutants associated with large CAFO's. Establishing different standards and approaches for large operations and smaller operations can help narrow the focus on where the primary air quality issues are, while making sure undue burden does not fall on Oregon's small farms.

In conclusion, we strongly believe this is an opportunity for Oregon to proactively get ahead of this issue by establishing policies now rather than waiting for existing problems to get worse and attempting to find costly solutions after the fact. Already, there are frequent stories in the Capital Press and other newspapers about neighbors, small farmers and concerned residents feeling like they have no voice in CAFO siting or pollution issues. SB 235 and this Task Force would not be in existence if there weren't the need for solutions to address specific problems raised by the relatively recent arrival of large CAFO's in Oregon. The work of this Task Force can be a model for not only how to address these issues in the dairy sector, but how to address emerging air quality and siting issues with other types of large CAFO's growing in number in Oregon as well.

Testimony of Paul Smull before the Dairy Air Quality Task Force  
March 18, 2008

Members of the Dairy Air Quality Task Force:

Thank you for the opportunity to testify.

My name is Paul Smull, and I am a 73 year old farmer. I am also a licensed electrician, a licensed general contractor, licensed potable water operator, I was a licensed septic installer for 20 years and I served on the State of Oregon's Electrical Apprenticeship Board for 10 years. In addition, I was the lead electrician for Willamette Industries for 36 years and one of the original founders and past President of Rickreall Water. I currently serve as Co-Chairman of the Rickreall Area Planning Advisory Committee.



I grew up in Polk County, Oregon. After high school, I was drafted into the United States Army, where I was sent to Korea to fight in the Korean War. Upon returning, I purchased a piece of property in Rickreall, Oregon, where my wife and I built our home and farm from the ground up by ourselves. We lived in our Rickreall home for 44 years before the Rickreall Dairy moved into our neighborhood.

When the dairy first arrived from California, they told the Rickreall Water Board that they would only milk 500 cows. However, within just two years time, the dairy expanded to over 1000 cows, which caused the Water Board to put a moratorium on the amount of water used in Rickreall. Over the course of seven years, the Rickreall Dairy has expanded to approximately 5000 head of cattle – all within a half of mile of my former home.

It is important for you and members of this Board to know that each dairy cow produces approximately 23 times the amount of waste as a person. In comparison, the Rickreall Dairy's 5000 cows all under one roof on concrete produces as much feces and urine as approximately 115,000 people, the equivalent waste produced by roughly all of the people in Medford and Tigard combined. However, unlike a municipality, the waste from the Rickreall Dairy is not treated with a wastewater treatment plant, but instead sits in an open-air pit just down the street from my home.

In 2002, I had a quadruple bypass surgery and sometimes the smell from the lagoon was so hard on my health that it was simply unbearable to be outside working on my farm or in the shop. When the smell was particularly bad, breathing was difficult, I got headaches, my sinuses ran, and my stomach became upset.

Now, don't get me wrong. I've been around farms all my life – in fact I even milked cows as a kid. I know the smells of agriculture. However, what I am here to tell you today is that these smells are not the natural smells typical Oregon agriculture. These emissions are not only noxious, but they have impacted my health, ruined my quality of life, and devalued my property.

In 1992, the Polk County Tax Hearing Officer determined that when the Rickreall dairy moved in, my property value diminished and therefore they lowered my property taxes.

In 2001, after my health deteriorated and the quality of life that I had valued in Rickreall was ruined, my wife Nancy and I decided that it was time to sell our home and move away from the smell of the dairy. Our house was appraised at \$400,000 and put on the market by Windemere Realtors. We had people from all over the West Coast look at our property and say that they loved it, would be interested in purchasing, but that they wouldn't be able to live with the smell of the dairy. It wasn't until, we lowered the price by \$100,000 and agreed to finance the sale ourselves, were we able to find a buyer.

Over the last decade, I have routinely turned to the Oregon Department of Agriculture for help. After all, I am a farmer, I was there before the mega dairy and this operation was harming my quality of life and my ability to farm. However, when I turned to the Department of Agriculture for help, I got nothing but a deaf ear.

First off, I do not feel that it is appropriate for the Department of Agriculture to be responsible for both promoting and regulating an industry. My experience with the Department of Agriculture is that time and time again they have come to the defense of these mega dairies at the expense of public health and our environment.

Regulation of mega dairies should fall under the auspices of the Department of Environmental Quality. These mega dairies are industrial operations, not farms and they pollute as much as any other industry. We have a double standard in our state, which is not right. It is time that we re-evaluate our CAFO program and that we require mega dairies to comply with the same air protection laws, as we require of other industrial operations.

In addition, citizens, who were there first need to have a say over the siting of industrial dairy operations in their community. And citizens need to have legal recourse should these industrial operations devastate their quality of life and destroy their property value.

Members of the Dairy Task Force, I encourage you to take these comments into consideration when you make your recommendations to the Legislature. It is important that public health and our environment are protected from the emissions that come from industrial mega dairies.

Thank you.

A handwritten signature in blue ink that reads "Paul 'Corky' Smull". The signature is written in a cursive, slightly slanted style.