PRODUCER PERSPECTIVES
AS THEY RELATE TO DAIRY FARMS
AND
GLOBAL WARMING

Chairman Harkin, Senator Casey and Agriculture Committee Members:

I want to thank you for the opportunity to speak before you today about the issue of global warming. I do not come here today as an expert on global warming, but to tell you some of the great things that happen on Brubaker Farms, and that I believe we can have an impact on the atmosphere and global warming.

To begin, I would like to speak with you about Brubaker Farms Dairy and dairies in general and how they can profit from the product (manure), which, in some cases, is thought of as a liability rather than an asset.

I like to think of myself not just as an environmentalist, but also as a business leader where I can lead in the local community and represent dairy farmers on state and national issues. Please refer to my short bio which I believe you received.

Brubaker Farms of Mount Joy, Pennsylvania, is owned by my wife and me, in partnership with our two sons, Mike and Tony. My father purchased the farm in 1929 and started the operation with eight (8) cows. My brother and I purchased the farm from our father in the early 60's, at which time the animal operation consisted of 18 cows. In the early 90's, my two sons graduated from college and wanted to come back to the farm to be a part of the operation. At that time, my brother sold his interest in the farm to me and my sons, and we entered in to a formal partnership to manage Brubaker Farms. At the time the partnership was formed, the Brubaker animal operation consisted of 200 cows. The farm now has over 800 cows, 600 young stock, and also a 250,000 bird broiler chicken operation per year. These expansions to the operation allow it to provide the necessary income to sustain the three farm families that now rely on it for their economic well-being.

We have developed an operation that is both financially stable and is an important part of the local economy. We have taken actions to ensure that the site is maintained as a working farm in the future through participation in the Pennsylvania Farmland Preservation Program. In order to address farm commodity price issues, farm expenses, and family financial needs, we are ready

to make the necessary business decisions to ensure that the farm will continue to be economically viable in the future. The farm is our family business and the economic viability of the operation is critical in order to allow it to continue to be an effective business well in the future, and for it to be an economically sustainable family enterprise.

The most recent project we have completed is a manure digester. We are excited about what this new addition means to our farm and to the energy security of Lancaster County, Pennsylvania and neighboring community. At the present time, our digester is generating approximately 4-5 mw (megawatts) of electricity a day. Most of the electricity that we generate is being sold back to the local electric utility company, PPL. We have the capability of producing enough electricity to supply approximately 150-200 homes a day.

Key to the methane production is the cows and heifers. The manure flows by push and gravity to a recovery pit where it is pumped into a large lagoon of approximately 700 thousand gallons and where bacteria in the lagoon converts volatile solids in the manure into biogas or methane gas. The lagoon is completely covered and insulated. The gas flows underground into the generation building which houses a large Guascor engine and generator capable of producing 225 kw (kilowatts).

Now, I would like to speak to some of the advantages of a methane digester:

- Reduces the strain on the PPL grid
- Reduces the need for electricity produced from fossil fuel power plants
- Reduces pathogens in the digested manure
- Separates the solids from liquid and recycles the solids for bedding
- Reduces the odor by 75 to 90% after digested
- Fly larvae are killed by the digester, resulting in less flies
- Reduces methane and other greenhouse gases into the atmosphere
- Weed seeds killed in digested manure which in turn can reduce chemical use
- Selling electricity to the local power company as renewable energy
- We are permitted to add food by-products that can be metered to the manure which makes extra electricity.
- Possibility of partnering with cafeterias to use food scraps added to manure rather than land filling which makes electricity. In turn, this can result in a profit to the

farmer.

- Methane is one of the potent greenhouse gases. It is 20 to 23 times more powerful in trapping heat in the atmosphere than carbon dioxide.
- We make a profit from the sale of carbon credits to industry or individuals who need or want to offset emissions.
- As a greenhouse gas, methane differs from carbon dioxide in an important way. Methane remains a climate-change threat in the atmosphere for a number of years.
- The reduction in the methane from our digester can lead to a slowing of climate change.
- Use of the manure after it goes through the digester is readily available to plants for plant food, which, in turn helps prevent leaching and a chance for run-off.

As we all know, in this critical time, the dairy farmer has some financial difficulty. Some of the things we talked about today could help the dairy-livestock producer. As a side note, I would be happy to offer suggestions or ideas that could help correct the dairy situation.

I believe that, over the next ten (10) years, environmental and renewable energy issues are going to be some of the biggest challenges for agriculture and farmers. Using state and federal funding and loan assistance for this project and our new solar project to produce electricity for 150 homes on the roof of our new heifer barn helps Brubaker Farms make our goals a reality.

I believe investing in projects like these is good for the future of the dairy industry's economy, environment, and the entire world.

I will be glad to answer any questions you might have.

Thank you again for the opportunity to speak today.

Luke Brubaker
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