

From: Jones, Enesta [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=65B8E6C6E5CA4A7A9AE85D98A4C8EEDB-EJONES02]
Sent: 11/3/2017 12:57:53 PM
To: Chris Berdik **Ex. 6**
CC: Press [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b293283291dc44e0b5d1c36be9281d8a-Press]
Subject: RE: media inquiry (Agstar)

Hi Chris, our responses below are attributable to an EPA spokesperson:

1. The "20 Years of Anaerobic Digestion" pdf on EPA's site notes the growth in digesters from "a handful" in 1994 to 247 nationwide in 2014. What's that number currently?

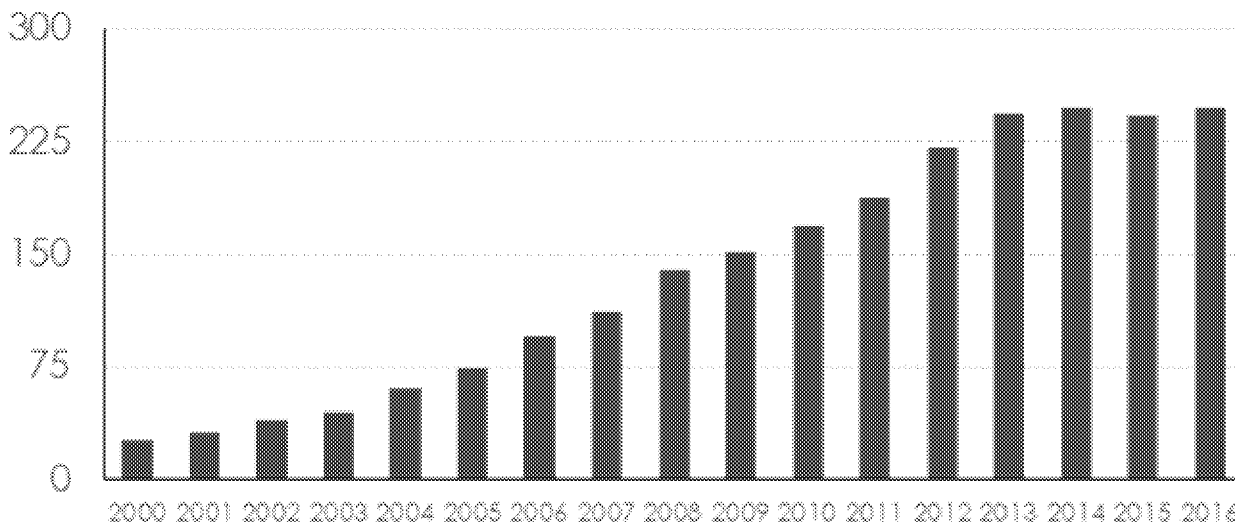
There are approximately 249 on-farm digester projects nationwide.

2. Same reference as above: That's an average of about maybe 10 to 12 additional digesters per year, but I doubt the growth has been that even. Has the growth been faster in more recent years or in a few notable years? And why? What spurs growth of anaerobic digestion in those fast-growing years?

Below is a chart showing the growth in the number of on-farm digesters since 2000. Growth has slowed due to low energy prices and disappearing renewable energy incentives across most of the country. <!--[if !vml]-->

Cumulative On-Farm Digester Projects

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Growth is traditionally spurred by state and federal incentives that either help to offset the initial capital cost of system installation or incentivizing the production of renewable energy over time. States like California and Vermont continue to incentivize the growth of this sector.

3. My story is focused on dairy farms in the Northeast, and New England in particular. A number of these states have digesters that utilize food waste in addition to animal manure. To what extent do the 247 (or so) digesters run completely on manure as feedstock versus food/manure? Is there a regional difference? Is it a difference in when the digesters came online?

Based on voluntarily collected AgSTAR data and a recent nationwide survey conducted by *BioCycle* magazine, an estimated 94 farm digesters codigest feedstocks other than manure.

Farms all across the U.S. co-digest. In recent years, we've seen an increase in the number of farms co-digesting in the Northeast U.S. This can largely be attributed to the food waste bans implemented in several northeast states, the tipping fees collected by the projects for management of the food waste, and the increase in biogas production realized from co-digestion. There are several good project examples in the Northeast of co-digesting of animal manure and food waste.

You can dive in further to analyze these trends via AgSTAR's Anaerobic Digester Project Database:
<https://www.epa.gov/agstar/livestock-anaerobic-digester-database>

4. I know that one of the services of Agstar is to help farms assess whether anaerobic digestion is right for them. I'd love to speak with an expert about how the availability of foodwaste as a feestock impacts this assessment.

Food waste can provide a significant boost to the viability of AD projects. Food waste has a higher biomethane potential (BMP) than manure (although the BMP of the food waste is highly variable based on the content). Therefore, the digesters increase biogas production. This equates to potential income and energy savings depending on the end use of the biogas (energy/heat/power). Tipping fees collected for accepting offsite food waste also provide an additional revenue stream that can help the economics of projects.

However, farms must be aware and plan for how the food waste will affect both the operations of the digester and their nutrient management plans.

5. Has EPA sponsored studies that give estimates on the greenhouse gas emissions plus/minus of anaerobic digestion per kilowatt of energy produced compared to standard grid energy? It would be gold to have a study like that looking at digesters that took in some portion of food waste, if that exists.

AgSTAR estimates the indirect emissions reductions from biogas produced from on farm digesters that displace grid energy. See [AgSTAR's Data and Trends](#) page for more information. In 2015, AgSTAR estimates that the 247 on farm digesters avoided 560,000 Metric Tons CO₂ equivalent emissions.

6. I've read of large-farm anaerobic digestion facilities in the UK having problems with leaks of digestate, fouling up local water. Have there been any issues like that among the anaerobic digesters here in the US? If not, how have they been avoided (better storage tanks, better oversight, better siting of the digesters?)

Most incidents relating to malfunctioning digesters are due to improper design or operation and maintenance of systems vs. the system/technology failing. There are a few examples of overflowing digesters in the U.S., but as the industry continues to mature and operators are better trained, the number of incidents has declined.

Most of the failures related to manure management releases in the U.S., however, have been related to traditional lagoon storage of manure and not to anaerobic digester systems.

7. What are the prospects for the growth of anaerobic digestion in the US as an energy source? I.E. Would it be reasonable to expect the next decade to bring similar growth as the previous decade, or much faster, or much slower, and why?

AgSTAR estimates that there is the potential for over 8,000 additional livestock digesters farms in the U.S. Biogas can be used to generate heat as well as energy generation in the form of electricity and fuel (renewable natural gas), which can be used both on farm or sold to the grid. Several farms also earn revenue from digestate products, which can replace synthetic and mined fertilizers and other horticulture products that use unsustainable peat moss and plastics.

Low energy prices and lack of financial incentives make growth challenging. However, digesters allow farmers to diversify their revenue streams, making their businesses more resilient to changing markets. Many farmers that are building digesters today view them as a long term investment for their farm and family as they pass the farm along to

their children and grandchildren. Digesters are much more than energy producers, they're a tool for farms to manage manure and nutrients and control odors, improving the local air, water and soil.

From: Chris Berdik [mailto:**Ex. 6**]
Sent: Thursday, November 02, 2017 10:09 AM
To: Jones, Enesta <Jones.Enesta@epa.gov>
Subject: Re: media inquiry (Agstar)

Hi Enesta,

Thanks, looking forward to seeing them.

-Chris

On Wed, Nov 1, 2017 at 6:15 PM, Jones, Enesta <Jones.Enesta@epa.gov> wrote:

Hi Chris, my apologies for the delay. Hope to be in touch tomorrow with our responses.

On Oct 17, 2017, at 6:15 AM, Chris Berdik <**Ex. 6**> wrote:

Hi Enesta,

Yes, I landed the story with Commonwealth magazine.

Regards,
Chris

On Mon, Oct 16, 2017 at 8:34 PM Jones, Enesta <Jones.Enesta@epa.gov> wrote:

Hi Chris, have you landed a publication for this story? Who are you pitching it to?

On Oct 12, 2017, at 4:52 PM, Chris Berdik <**Ex. 6**> wrote:

Sorry... first question had a typo, the "handful" of digesters was in 1994, not 2014.

On Thu, Oct 12, 2017 at 4:50 PM, Chris Berdik <**Ex. 6**> wrote:

Sure, Enesta. Firm deadline is November 1. Here are specific questions.

1. The "20 Years of Anaerobic Digestion" pdf on EPA's site notes the growth in digesters from "a handful" in 2014 to 247 nationwide in 2014. What's that number currently?
2. Same reference as above: That's an average of about maybe 10 to 12 additional digesters per year, but I doubt the growth has been that even. Has the growth been faster in more recent years or in a few notable years? And why? What spurs growth of anaerobic digestion in those fast-growing years?
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7. What are the prospects for the growth of anaerobic digestion in the US as an energy source? I.E. Would it be reasonable to expect the next decade to bring similar growth as the previous decade, or much faster, or much slower, and why?

Thanks,
Chris

On Thu, Oct 12, 2017 at 4:26 PM, Jones, Enesta <Jones.Enesta@epa.gov> wrote:

Hi Chris, please send me specific questions and firm deadline.

On Oct 12, 2017, at 3:59 PM, Chris Berdik <Ex. 6> wrote:

Dear Enesta,

I'm a freelance science journalist in Boston. I'm working on a feature about anaerobic digestion on New England dairy farms, and I was hoping to interview somebody at EPA about the AgStar program for a national perspective on the prospects, growth, and challenges of this technology.

Would it be possible to set up a phone interview for sometime next week? My deadline isn't until November, but I am at work on several features at once, so I'd love to schedule this soon.

Many thanks for your time and help.

regards,
Chris