

## **Comment 1 for Dairy Subgroup 1 Comment Docket (for non-digester projects) (dairysubgrp1-ws) - 1st Workshop.**

First Name: Steve  
Last Name: McCorkle  
Email Address: [mccorkle@agwastesolutions.com](mailto:mccorkle@agwastesolutions.com)  
Affiliation: Ag Waste Solutions (AWS)

Subject: Comment letter for CARB Dairy and Livestock Working Group Subgroup #1  
Comment:

Agricultural Waste Solutions, Inc. ("AWS"), headquartered in Westlake Village, California, wishes to express our gratitude to CARB for allowing us the opportunity to present comments on the Dairy and Livestock Subgroup #1 Meeting of July 17, 2017 and for inviting comments from stakeholders and the public. AWS works with California dairy farms to produce low carbon transportation fuels and carbon negative co-products that reduce GHG emissions and improve water quality while creating new profit centers from manure and other ag resources.

Please see below our comments from the July 17, 2017 Dairy and Livestock Subgroup #1 Kickoff Meeting

- Based on the pie chart included in the presentation on July 17th, dairy manure accounts for 25% of total methane emissions in California. The methane emissions created from dairy manure are created mostly from the lagoons and other storage and handling practices where manure is purposely allowed to anaerobically decay. Although lagoons account for most methane emissions from dairy farms, methane and other SLCP's are also created during the anaerobic decaying processes of solids storage, handling and transportation, composting, and land application. We believe the state needs to enable and support technologies that process raw manure, AD digestate and other manure co-products at their freshest state - before they have had the opportunity to anaerobically decay and create methane and other SLCPs. Pyrolysis/gasification, when used in conjunction with AD as a stand-alone solution with fresh manure feedstock, is a proven technique to prevent methane from ever forming due to anaerobic decay of manure. Biochar, as a co-product of pyrolysis, is a carbon negative soil amendment that will further reduce GHG from dairy farms. We believe that the prevention of open anaerobic decay of manure and manure digestate co-products is the only reasonable method of reaching the 40% methane reduction mandate from dairies.
- More research incentives are needed to recognize and qualify non-digester technologies for the reduction of SLCP's that have a more holistic approach encompassing all environmental needs and benefits. Water quality goals associated with individual dairy nutrient management plans are an example of this. These goals increasingly cannot be met with AD alone unless the suspended and dissolved solids (e.g. salts) are kept out of the lagoons and converted into inert, carbon negative co-products that can be either be used on the farm as soil amendments or exported off the farm in a dramatically reduced volume. The lagoon then becomes a

fertigation or clean water reservoir instead of the most significant methane generator on the farm, allowing farmers to meet their water quality and nutrient management goals as well as their methane emission reduction goals.

- Evaluation metrics and models should be based on GHGe and overall environmental benefits that include the environmental implications of long-term practices. The models and metrics needs to be developed and implemented in advance of the technologies being included as approved technologies or techniques based on their abilities to reduce total GHGe from dairies by a greater percentage than AD and other approved technologies and techniques. An example of this is the "Pyrolysis/Gasification" category that was recently added to the CDFA list of AMMP technologies and practices. Although we fully support the addition of Pyrolysis/Gasification as an AMMP technology, we recently learned that it will not be accepted as a 2017 CDFA DDRDP AMMP grant program application because there exists no CA Greet or other evaluation metric and model to evaluate its overall ability to reduce GHGe from dairy farms. We were told that such models will need to be generated and approved by CARB, so we respectfully request that this work begin as soon as possible.

Respectfully,

Steve McCorkle, CEO  
Ag Waste Solutions (AWS)

Attachment: <https://ww2.arb.ca.gov/sites/default/files/BARCU/barcu-attach/1-dairysubgrp1-ws-UDNXMAZ1BDUCW1Qw.pdf>

Original File Name: CARB Dairy and Livestock Subgroup 1 meeting comments letter 8-1-17.pdf

Date and Time Comment Was Submitted: 2017-08-02 15:42:59

No Duplicates.

**Comment 2 for Dairy Subgroup 1 Comment Docket (for non-digester projects) (dairysubgrp1-ws) - 1st Workshop.**

First Name: Stephen  
Last Name: McCorkle  
Email Address: [mccorkle@agwastesolutions.com](mailto:mccorkle@agwastesolutions.com)  
Affiliation: Ag Waste Solutions (AWS)

Subject: October 16, 2017 Subgroup 1 Meeting Comments

Comment:

Please find attached comments from the October 16, 2017  
Dairy/Livestock Subgroup 1 meetings.

Steve McCorkle  
Ag Waste Soulutions

Attachment: <https://ww2.arb.ca.gov/sites/default/files/BARCU/barcu-attach/2-dairysubgrp1-ws-VjVXMFAjADFRCAZi.pdf>

Original File Name: CARB Dairy and Livestock Subgroup 1 meeting comments letter 10-20-17.pdf

Date and Time Comment Was Submitted: 2017-10-31 09:51:34

No Duplicates.

## **Comment 3 for Dairy Subgroup 1 Comment Docket (for non-digester projects) (dairysubgrp1-ws) - 1st Workshop.**

First Name: harvey

Last Name: eder

Email Address: harveyederpspc@yahoo.com

Affiliation: pspc public solar power coalition

Subject: sb1383 subgrroup 1-3 atop drug resistant anti b in Natural G System HE PSPC 12/15/17

Comment:

Drug reststant anti biotics via this program are put into the air and into the dirty /nat gas dist system via 70% OF HUMAN ANTI BIOTICS ARE USED BY ANIMALS IE CATTLE SWINE ETC . NATURAL/DIRTY GAS CH4 MUST BE FUNDED BY CARB TO STUDY AS A TOXIC BENZENE FORMALDAHYDE, NOX SOX, PM O3 ETC MEASURED AS PREMATURE DEATHS PER MILLION PEOPLE. dR. LINDA SMITH SUPPORTS THIS RESEARCH BEING DONE IS ATARTED MY ME HARVEY EDER DIRECTOR ETC PSPC PUBLIC SOLAR P[OWER COALITION IN.DURING 3 TELEPHONE CONVERSATIONS THIS YR. SHE IS HEAD OF HEALTH RESEARCH FOR CARB..

EACH PER MATURE DEATH IS VALUED AT \$9,000,000 PER DEATH SOCIAL COST OR THE STATE DEATHS OF 7.5-9K PLUS PER YR EQUALS \$9 BILLION PER THOUSAND DEATHS OR ABOUT TIMES 8 MINUM EQUALS \$72 BILLION COST TO SOCIETY EACH YEAR OR THIS 10 YRS \$720 BILLIONS DOLLARS OR THE 40 YR LEFT 30 TO 50 PLUS LIFE OF A SSSSSSSSSSSOLAR SYSTEM EQUALS ABOUT \$3 TRILLION DOLLARS USING CURRENT CARB STATE FIGURES WITHOUT COUNTING CALIF DEATHS FROM ANTI BIOTICS DEATHS VIA GAS ETX AT AT LEAST 23K CDC NUMBERS AND ONE AS HIGH AS 300-400,000 US DEATHS PER YEAR PLUS ANTI BIOTIC DEATHS PER YR WITH ABOUT 10 PERCENT OF DEATNS ON CALIF OR 30-50,000 FROM SEEWARGE LANDFILLS AND AAMIUNAMLS THIS IF 5-20 TIMRD SD MUvh OT \$10 TTRILLION TO 20 T ADDED TO THE CARB NUMBERS ALSO 4100 PEATHS PER YR ARE IN THE SCDIST. INCORPORATED BY REFERENCE ALL ORTHE RECORD OF ME HARVEY EDER AND PSPC PUBLIC SOLAR POWER COALITION RECORD FOR THE SCD 2016 AQMP THIS IS AAAAAAALTO INCORP BY REF INTO THE LATEST SCOPING PLAN AND THE LITIGATRION WITH ME AND CARB AND SCDIST

12/15/17 11.24 AM

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-12-15 10:50:42

No Duplicates.

## **Comment 4 for Dairy Subgroup 1 Comment Docket (for non-digester projects) (dairysubgrp1-ws) - 1st Workshop.**

First Name: Joshua

Last Name: Kim

Email Address: [joshua.kim@arb.ca.gov](mailto:joshua.kim@arb.ca.gov)

Affiliation:

Subject: Biochar Emailed Comment for March Subgroup #1 Meeting (3-12-18)

Comment:

The following comment/question was submitted via email during the March 12th Subgroup #1 Meeting.

Name: Steve McCorkle

Affiliation: Ag Waste Solutions (AWS)

Comment: A comment was made during the meeting that biochar does not have to be produced from a true pyrolysis process/environment and that biochar can also be produced from gasification and/or boilers. While technically correct, I want to point out the following two concerns about producing biochar in California with any process that is not a true pyrolysis process:

1. Gasification and boiler/rotary kiln systems are no longer permittable in SCAQMD (South Coast Air Quality Management District) and most of the Central Valley air districts, mostly due to their NOx emissions being over the threshold of these very stringent air districts even if they use a thermal oxidizer. The only permittable biochar production systems in these air districts will be true pyrolysis systems operating in the absence of air.

2. The quality of biochar produced from gasification can be negatively impacted by the lack of temperature control and consistency through the material during the process. Most of these systems use a water quenching technique to cool the product rather than an indirect cooling method. Fast heating through incineration with air and subsequent quenching with water interrupts the temperature control and consistency required to produce the highest quality biochar matrix. Quenching also washes away most of the minerals and can adversely impact the short-term nutrient release mechanism of the biochar matrix.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-03-12 14:47:48

No Duplicates.

**Comment 5 for Dairy Subgroup 1 Comment Docket (for non-digester projects) (dairysubgrp1-ws) - 1st Workshop.**

First Name: Joshua

Last Name: Kim

Email Address: [joshua.kim@arb.ca.gov](mailto:joshua.kim@arb.ca.gov)

Affiliation:

Subject: Comment on Solar/Air Drying Manure in California

Comment:

[This comment/question was submitted via email during the Dairy/Livestock Subgroup #3 meeting on March 12, 2018]

Name: Steve Wirtel

Affiliation: Kore Infrastructure

Comment: The speakers from Newtrient alluded to the use of solar/air drying manure in California. What is the practicality of directly solar/air drying scraped manure and avoiding mechanical dewatering and drying?

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-03-26 13:34:56

No Duplicates.

**Comment 6 for Dairy Subgroup 1 Comment Docket (for non-digester projects) (dairysubgrp1-ws) - 1st Workshop.**

First Name: Fred

Last Name: Nichols

Email Address: frednaz@gmail.com

Affiliation:

Subject: Non-Digester Projects

Comment:

Thank you for this opportunity to comment.

My purpose is to share an alternative solution and not to plug my business so I am keeping this informal.

Attachment: <https://ww2.arb.ca.gov/sites/default/files/BARCU/barcu-attach/9-dairysubgrp1-ws-Wj1dPlM8VGJRJQNi.docx>

Original File Name: General comments to staff and participants involved in the dairy.docx

Date and Time Comment Was Submitted: 2018-11-05 12:41:52

No Duplicates.

**There are no comments posted to Dairy Subgroup 1 Comment Docket (for non-digester projects) (dairysubgrp1-ws) that were presented during the Workshop at this time.**