



Latest News from Rich Earth

- [Peecycling Urinal at Hermit Thrush Brewery \(1/16/2023\)](#)
- [Learn about our Bellows Falls Expansion! \(4/1/2022\)](#)
- [Vermont: Stop Landfilling Compost From Composting Toilets \(2/1/2022\)](#)

[View all Blog posts](#)

Donate urine, save water!



Over 2,300,000 gallons of water saved since 2013!

- [Donate Urine](#)
- [Donate Money](#)

Rent our urine-collecting portable toilets for your public event—[email us](#) for details.

[Back to all articles](#) →

Webinar: Reducing On-Farm Ammonia Loss From Manure through Fermentation Using Whey & Paper Fibers

Posted by [Julia Cavicchi](#) on August 22, 2023



Thursday, September 7th 9 – 10 am

Ammonia volatilization from manure is a major source of nitrogen pollution in the environment, and also reduces the fertilizer value of manure on the farm. Conventional methods of acidification have shown promise in mitigating ammonia emissions but involve the use of concentrated inorganic acids, which can be hazardous and expensive to handle.

Join the Rich Earth Institute to learn about an innovative approach to reducing ammonia emissions: Bio-Acidification via Fermentation. This method introduces carbon-rich waste materials into liquid manures, initiating a fermentation process that generates organic acids. This, in turn, lowers manure pH and mitigates ammonia loss. During this webinar, we will share our research findings fermenting liquid dairy manure, digestate, and pasteurized human urine, collected through our Urine Nutrient Reclamation Program.

What will be covered:

- Introduction to bio-acidification and its potential benefits
- Case studies assessing on-farm feasibility with farmer-partners and advisors
- Lab trials testing optimal recipes using three waste materials: acid whey, sweet whey, and short paper fibers (pulp sludge)
- Insights from farmer interviews in Vermont
- Interactive Q & A and Discussion, featuring perspectives from participating farmer-partners in this project

Recording:



Note: This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number ONE21-402. Any opinions, findings, conclusions, or recommendations expressed in this webinar are those of the speakers and do not necessarily reflect the view of the U.S. Department of Agriculture.

- Home
- Rethinking Urine
- Our Work
- Publications
 - Our Research Results
 - Blog
 - Rich Earth in the News
 - Get Involved
 - About Us

Blog Categories

- Annual Summit (6)
- Cape Cod (1)
- Conferences (1)
- Development (10)
- Education (6)
- Events (19)
- Gardening (4)
- Guest Post (4)
- Kim in Kenya (9)
- Latest News (35)
- Our Team (5)
- Research (13)
- Technology (1)
- Uncategorized (16)
- Youth (2)

Recent Posts

- [Abe Presents Keynote at Australia Conference on Urine Recovery](#)
- [Rich Earth Summit: Nov 7-9, 2023](#)
- [Webinar: Reducing On-Farm Ammonia Loss From Manure through Fermentation Using Whey & Paper Fibers](#)
- [Peecycling in the Valley: Community Conversations for Franklin County, MA](#)
- [We're Hiring! Urine and Wool in the Rich Earth Demonstration Garden](#)
- [Urine Fertilizer at Yellowbud Farm](#)
- [Partner spotlight: Peecycling in Cape Cod](#)
- [Community Connection at the Rich Earth Jubilee](#)
- [Rich Earth Jubilee: A Celebration of Local Food Cycles](#)
- [Watershed-Friendly Gardening](#)
- [Nine Urine Pasteurizers Sold Save the date! Rich Earth Summit: Nov 7 – 9, 2023](#)
- [New SARE Research Project Exploring Biochar from Biosolids Seated Pee Toilet](#)
- [Peecycling Urinal at Hermit Thrush Brewery](#)
- [Teaching Future Peecyclers](#)
- [Urine Recycling Now Open in Rockingham](#)
- [Open House and Global Urine Research Summit](#)
- [Resource-Recovering Portable Toilets](#)
- [Rockingham Depot Grand Opening](#)
- [Brightwater Tools Spin-Off Seeks Software Developer](#)
- [Anthro-vermi-ponics](#)
- [Subsidies for a Urine Diverting Toilets in Vermont](#)
- [Rich Earth Spinoff, Brightwater Tools, receives \\$1M NSF Funding](#)
- [Urine Fertilizer Collectors on Etsy Flush: The Documentary](#)
- [Screening & Panel Conversation Learn about our Bellows Falls Expansion!](#)
- [Poets for Peecycling: 2022 Urine Donor Kickoff Webinar Series](#)
- [Vermont: Stop Landfilling Compost From Composting Toilets](#)
- [Global Shortage, Bodily Abundance: Urine Fertilizer Could Help Address Urea Crisis](#)
- [Community Urine Recycling Program Update](#)
- [Urine Nutrient Recycling on World Toilet Day](#)
- [Rich Earth Summit 2021](#)
- [New Peer-Reviewed Publication](#)
- [Farm Field Day](#)
- [New Social Research Publication!](#)
- [Infrastructure Bill and VT Wastewater](#)
- [Urine Donor Kick-Off 2021](#)
- [MLK Day](#)
- [Flush Away 2020 with a Game Spread Pees & Love this Holiday Season](#)
- [World Toilet Day & Trans Awareness Week](#)
- [Executive Director Announcement](#)
- [All People Peel!](#)
- [Peecycling & Bicycling](#)
- [Pharmaceutical Field Trials](#)
- [Launching the Gold Ribbon Commission](#)
- [2020 Rich Earth Virtual Summit: Reclaiming Urine as a Resource](#)
- [New Farm Research Project!](#)
- [Rich Earth in Solidarity](#)
- ['Urine My Garden' Workshops](#)
- [Small Business Innovation](#)
- [Research grant from NSF!](#)
- [Putting Down Roots – Building Purchase](#)
- [Peecycling in a Pandemic](#)
- [Springtime Field Applications](#)
- [Urine Donor Kick-Off](#)
- ["No Innovation Without Representation"](#)
- [New Publication! Village Sanitation Pilot Study](#)
- [Farm Research](#)
- ["Ick Factor"?](#)
- [Board Retreat](#)
- [2019 Harvest in the Demonstration Garden](#)
- [Continued Support for Peecycling in VT from Long Island Sound](#)
- [The 2019 Rich Earth Summit is Quickly Approaching!](#)
- [Our Summer Interns are Amazing, and Pursuing Interesting Projects...](#)
- [April 13th: Public Party, Performance, & Presentations In Putney for Pee!](#)
- [Rich Earth Institute Receives Multiple Awards From the Long Island Sound Future's Fund](#)
- [2018 Summer Interns](#)
- [Non-grid Solutions for the Future of Urban Water Management Conference](#)
- [Team R2D2 designs urine diverting toilet](#)
- [The Blue Whales Present: Operation Porta Potty Biozoners!](#)
- [2017 North Quabbin Garlic and Arts Festival](#)
- [3rd Annual Urine Diversion Summit](#)
- [Unveiling of New Urine Depot](#)
- [Strolling of the Heifers 2017](#)
- [Spring Pump Out 2017](#)
- [Residency in Yellow Springs, Ohio](#)
- [Welcome to our new Research Center](#)
- [Rich Earth team travels to Michigan](#)
- [Environmental Science & Technology Publication](#)
- [National Science Foundation Grant](#)
- [2016 Urine Diversion Summit](#)
- [New Grants Support Summer Research](#)
- [Rich Earth Ecosanitation-Ladies – Culminating Spring Events](#)
- [Liquid Gold – Spring Pump Out Going Beyond the Toilet at North East Sustainable Energy Alliance \(NESEA\)](#)
- [Congratulations to the 2015 Rich Earth Piss-Off winners!](#)
- [World Toilet Day 2015 – Guest Posting](#)
- [Urine Diversion – Moving Ahead!](#)
- [Last post from Kenya](#)
- [Peecycling in Kibera](#)
- [Last day of meetings!](#)
- [Visits to the World Bank and Umande Trust](#)
- [Water Services Trust Fund](#)
- [Visit to Sanergy](#)
- [Here we go.....](#)
- [Rich Earth Recognized](#)
- [Board Retreat](#)
- [Leaving next week for Nairobi!](#)

Archive

- September 2023
- August 2023
- July 2023
- June 2023
- May 2023
- March 2023
- February 2023
- January 2023
- November 2022
- October 2022
- September 2022
- August 2022
- July 2022
- June 2022
- April 2022
- March 2022
- February 2022
- December 2021
- November 2021
- October 2021
- September 2021
- June 2021
- May 2021
- April 2021
- January 2021
- December 2020
- November 2020
- October 2020
- September 2020
- August 2020
- July 2020
- June 2020
- May 2020
- March 2020
- January 2020
- December 2019
- November 2019
- September 2019
- August 2019
- April 2019
- January 2019
- July 2018
- April 2018
- March 2018
- December 2017
- November 2017
- October 2017
- September 2017
- July 2017
- May 2017
- April 2017
- January 2017
- December 2016
- October 2016
- September 2016
- August 2016
- June 2016
- May 2016
- March 2016
- January 2016
- November 2015
- October 2015
- January 2015

GET INVOLVED



Donate Urine



Donate Money



Connect on Facebook



Contact Us

Join our email list:

Research Center: 355 Old Ferry Road Brattleboro, VT 05301

Mailing address: PO Box 8003 Brattleboro, VT 05304

info@richearthinstitute.org

1-802-631-0196

Web design by EHW Design.

©2023 Rich Earth Institute.

Our Collaborators



“Pollution is nothing but the resources we are not harvesting. We allow them to disperse because we've been ignorant of their value.”

- R. Buckminster Fuller

Rich Earth Institute Research Webinar: Reducing On-Farm Ammonia Emissions through Bio-Acidification of Manures



Thursday, September 7th, 9 - 10 am

[Register via Zoom](#)

Ammonia volatilization from manure is a major source of nitrogen pollution in the environment, and also reduces the fertilizer value of manure on the farm. Conventional methods of acidification have shown promise in mitigating ammonia emissions but involve the use of concentrated inorganic acids, which can be hazardous and expensive to handle.

Join the Rich Earth Institute to learn about an innovative approach to reducing ammonia emissions: Bio-Acidification via Fermentation. This method introduces carbon-rich waste materials into liquid manures, initiating a fermentation process that generates organic acids. This, in turn, lowers manure pH and mitigates ammonia loss. During this webinar, we will share our research findings fermenting liquid dairy manure, digestate, and pasteurized human urine, collected through our Urine Nutrient Reclamation Program.

What will be covered:

- Introduction to bio-acidification and its potential benefits
- Case studies assessing on-farm feasibility with farmer-partners and advisors
- Lab trials testing optimal recipes using three waste materials: acid whey, sweet whey, and short paper fibers (pulp sludge)
- Insights from farmer interviews in Vermont
- Interactive Q & A and Discussion, featuring perspectives from participating farmer-partners in this project

REGISTER



This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number ONE21-402. Any opinions, findings, conclusions, or recommendations expressed in this webinar are those of the speakers and do not necessarily reflect the view of the U.S. Department of Agriculture.