

## **Day 3 - Thursday Nov. 4th**

### **Chat Conversation**

#### **Agricultural Uses for Urine Fertilizer**

*Moderator: Mike*

*Presenters:*

**Jenna Senecal**

##### **Dry urine fertilizer: a field report**

- **From Carol McCreary:** Jenna, What female urinal will you use? Adapted KROS?
  - **From Jenna:** I haven't had the opportunity to test them myself yet, but these are the companies that I am connecting with: <https://www.missoir.de/>, <https://lapee.dk/>, <https://urinoirmarcelle.fr/>, I don't know KROS - do you have a link?
    - **From Jenna:** EOOS NEXT is also have a unisex urinal that we hope to test at SLU soon.
- **From Thor:** Jenna, how have you tested the urine diversion retrofit mechanism for the ports-potty? What is your operational plan?
  - **From Jenna:** Thor, we're in the process of the retrofitting. I will keep you posted. As for the operational plan, that's a great question and needs some explaining - it would be nice to hear your inputs- catch up soon?

**John Culpepper**

##### **Human urine: A powerful climate change mitigation tool?**

**Arthur Davis**

##### **Trialing Urine Fertilizer on New Crops and Application Methods**

- **From Michel Riechmann:** Rich Earth, Can you make a comment on the farmer selection? Where they positive about urine usage for crops beforehand or were there Farmers with strong scepticism as well?
  - **From Rich Earth:** Some of them had expressed interest in the past, and others we reached out to because we were trying to work with farmers who grew a range of different crops. In terms of skepticism, there were differing amounts of skepticism among the farmers in different ways. Some had worries about the practicality of use, while others perhaps had questions about how consumers might react. I would say that overall, the process of actually using it helped all of them become more comfortable with the idea
- **From Doc Reiss** to Rich Earth Institute: I would like to know how to make the ping pong ball valve to be adapted for the jerry cans we would be using here in Togo.

**Renaud de Looze**

##### **Urine Fertilizer for Home Gardens: NPK Analysis and Application Methods**

- **From Lynn Broaddus:** Can you put link in for Renaud's book?
  - **From Julia/Support Team:** Renaud's Book: [https://www.amazon.com/gp/product/2359811002/ref=dbs\\_a\\_def\\_rwt\\_hsch\\_vapi\\_taft\\_p1\\_i0](https://www.amazon.com/gp/product/2359811002/ref=dbs_a_def_rwt_hsch_vapi_taft_p1_i0)
- **From Renaud de Looze:** if someone wants to know how to calculate NPK average in urine,, please ask Julia

**Robert Cossette**

##### **Solar-Dripper Evolutions and 2021 Taste Tests**

- **From Lynn Boaddus:** Robert, how often do you re-fill the solar dripper bottles?
  - **From Robert:** We refill 2 to 4 times a Week depending on the weather.

- **From Hilda:** Please let us know how to get your urine distribution drippers
  - **From Robert:** For those who want to have some Solar-Drippers you can email me at [r.cossette@oriaz.com](mailto:r.cossette@oriaz.com)
- **From Carol Steinfeld:** (I had a Harvard class nearly spit out my tomatoes when I told them how they were fertilized!)
- **From Renaud de Looze:** Roberts systems is excellent to apply phosphorus closed to the roots
- **From Robert:** <https://youtu.be/CyMNcxLwpLM> the tomato taste test with the Solar-Dripper

**From Ole:** Could be asked to full panel, What is the best response to those who are concerned about pharmaceuticals in unprocessed urine application?

- **From Renaud de Looze:** efficiency of compost to biodegrade medical residues associated with urine
- **From Michel:** Maybe that there is almost no waste water treatment plant that removes pharmaceuticals to date is a calming down argument. So far only one county in the world (to my knowledge) that is only just starting to remove pharmaceuticals from waste water at all.
- **From Jenna:** The attachment is in English: Pharmaceuticals in blackwater and fecal sludge. It is a really interesting read about pharmaceuticals.
  - **From Prithvi:** The project that Jenna referred to from Sweden showed that one would have to consume fertilized carrots and fertilized wheat for a very long time (21,000 years or more for adults) before people would ingest pharmaceuticals corresponding to the smallest therapeutic daily dose....that's a huge amount of carrots ;)
- **From Nancy Love:** Re pharmaceuticals, we are finishing our INFEWS project doing a risk assessment targeting pharmaceuticals to hopefully help with this discussion. More on that in the new year. I have to run off to other meetings and hate missing the chats at the end. Great job Rich Earth staff!!