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Benton & Warren County Agriculture & Natural Resources News

Jon Charlesworth
Benton/Warren Extension Educator
Agriculture & Natural Resources
charles6@purdue.edu

Purdue Extension Benton Co.
410 S Adeway, Ste A
Fowler, IN 47944

Purdue Extension Warren Co.
408 SR 28 E
Williamsport, IN 47993

Benton: 765-884-0140

Warren: 765-762-3231

extension.purdue.edu/county/benton

extension.purdue.edu/county/warren

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VOLUME 1.2

This is the second edition of a newsletter that will be published quarterly. My intention is to keep it brief and to the point. If a topic interests you and you would like additional information, please let me know by email at charles6@purdue.edu If you receive this newsletter in the mail and would prefer to receive future newsletters via email, let me know at the above email address. If you would like to be removed from the mailing list completely, let me know that also at the email address above.

PRIVATE APPLICATOR MEETINGS (PARP)

Private Pesticide License Holders: You may have lost track of the date your license expires and how many PARP meetings you have attended during your current 5-year licensing period. You can check these by visiting the State Chemist's website. OISC.purdue.edu/pesticide/ Once there, click on the 'My Records' tab near the top of the screen. Then choose 'Pesticide License Search' on the left side of the screen. Enter your last name and choose private applicator as your program type.

For a listing of all of the **upcoming meetings** that offer credits visit this website: https://ag.purdue.edu/department/extension/ppp/ and once there choose 'PARP Events' then 'View All Approved PARP Events'. You will see a listing of all of the upcoming PARP meetings in our state, including these nearby meetings.

- **January 22, 2024** 9 –11 am Fountain County PARP – Fountain County Fairgrounds 4-H Building, 476 US Hwy 136, Veedersburg, IN
- **January 29, 2024** 9-11 am Benton County PARP – Government Annex Building, 410 S Adeway, Fowler, IN
- **February 12, 2024** 9-11 am Warren County PARP - Purdue Extension Warren County Office (Fairgrounds), 408 SR 28, Williamsport, IN
- **February 21, 2024** Warren County SWCD annual meeting with PARP credit. West Lebanon Christian Church. This is a morning event, exact time of PARP meeting is still TBD.

It is always helpful if people **RSVP** for these events so that we can get the room set up ahead of time. You can RSVP to any of these events by emailing Jon Charlesworth at charles6@purdue.edu

SAFETY

Dr. Fred Whitford, Director of Purdue Pesticide Programs, has put together a nice publication on Railroad Crossing Safety. One of the key takeaway points from the publication that might just save a life: If you ever get a vehicle, tractor or trailer hung up or stuck on railroad tracks, the first thing you need to do—even before calling 911- is to look at the blue rectangular tag on the railroad crossing sign. That tag contains a phone number to call as well as the crossing location designation. Call that phone number and tell them what crossing you are stuck on. They will be able to contact the trains that may be on a collision course with you. Once you have that out of the way, then call 911. Worst case scenario: if you are stuck on the tracks and you hear the train coming and you are forced to bail and run, get away from the tracks but run in the direction the train is coming from. The debris is all going to be thrown in the direction the train is heading.

CARBON CAPTURE AND STORAGE (CCS)

I'm going to start this section by admitting to an error in the October edition of this quarterly newsletter. I stated that bp estimates that 1 million tons of CO_2 per year can be pushed down one injection well. My error was in stating that 1 million tons is 3X the amount of CO_2 produced annually by the Duke Energy power plant at Cayuga. In fact, the Cayuga plant generates in excess of 3 million tons of CO_2 annually. Therefore, instead of one injection well taking the CO_2 from 3 plants, it would actually take 3 injection wells to take the CO_2 from the Cayuga power plant.

With that correction out of the way, let's take a look at trees and their ability to sequester carbon. You may have seen this or something similar posted on social media. "There is a magic machine that sucks carbon out of the air, costs very little and builds itself…It's called a tree." While it is certainly true that trees can absorb carbon, the problem is the amount of CO_2 human activity is releasing into the atmosphere is enormous and far exceeds nature's ability to absorb it. Pre-industrial atmospheric CO_2 levels were 280 ppm. Today we are at 418 ppm and increasing by about 2.5 ppm each year. Why should we care? The scientific consensus is that we need to keep atmospheric CO_2 below 430 ppm to hold average global temperature increase to 1.5 degrees Celsius. Obviously, we are going to blow right past 430 ppm. It is probably more realistic to ask what temperature increase will result from 500 ppm and will the consequences be manageable?

Now, back to the trees: Why don't we just plant a bunch of trees to absorb the CO_2 and forget about this business of boring holes and injecting CO_2 in the sandstone pore space? Managed timber can absorb between 2 and 13 tons of CO_2 per acre each year. Assuming the high end of this range, 13 tons, we would need to plant 230,000 acres of new trees to offset the CO_2 generated by just one average sized electricity generating facility which in turn, is just one of the thousands of point sources of CO_2 on this planet. We currently release more than 5 billion tons of CO_2 annually in the US alone and nearly 36 billion tons globally. Trees as well as soil can be used to temporarily absorb carbon from the atmosphere but the magnitude of this problem is such that injection of CO_2 into deep geological rock formations will likely need to be part of the solution. We have a large amount of geological pore space sitting under us in Benton and Warren Counties which makes us an inviting target for companies that want to sequester CO_2. It remains to be seen how hard we will be willing to fight to keep this from happening under us.