



AG LINE

PURDUE UNIVERSITY COOPERATIVE EXTENSION SERVICE, Fulton County

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This newsletter contains information on meetings that will happen in the next few months and some of my recent columns.

- ◆ I have had many requests for **Pesticide Class** information. On page 4 of this publication I have listed a virtual opportunity offered through Ripley County Extension.
- ◆ There will be many more webinars due to changes in presenting classes due to the Pandemic.
 1. The **Small Farms Conference** registration and information is below on this page.
 2. Virtual Events presented jointly by **The Global Agriculture Innovation Forum and the USDA Agricultural Service and Purdue university's Office Of International Program in Agriculture** this information may be found on page 2 of this newsletter.
 3. A **Crop Insurance Webinar** Information from Purdue Center for Commercial Ag on page 2.
 4. "**Forage Forum Fridays**", see page 3, this series begins March 5.
- ◆ **Sheep Producers** take note: Shepherds Campfire, a group of sheep producers will hold a meeting in Rochester on March 15 at the Talma Community Building , see details on page 5.

2021 Indiana Small Farms Conference

Since 2013, the Indiana Small Farm Conference has been the premier annual event for Indiana's small- and diversified-farm community — helping them experience continuing education and enjoy farmer-to-farmer networking.

In 2021, the conference, our ninth overall, will be held online March 4-6, 2021 — with keynote, breakout and networking sessions (and more) held on the Microsoft Teams platform. **There will be no in-person events due to public health concerns surrounding COVID-19.**

Registration is now open and the draft agenda is available. Visit our 2021 Small Farm Conference page: <https://www.purdue.edu/dffs/smallfarms/small-farm-conference-2021/>

The Indiana Small Farm Conference serves as the annual educational and farmer-to-farmer networking event for the Indiana small and diversified farm community. The conference was developed in response to a gathering of Indiana small farmers and stakeholders at the Purdue University campus in the fall of 2011. The Purdue Small Farm team hosted the inaugural conference in 2013 and has had continued success thanks to the support of Indiana farmers and organizations.

The Purdue Center for Commercial Ag has a variety of webinars. The one on March 1 is about crop insurance. In this program they provide insight into decision making on crop insurance.

The webinar will review corn and soybean crop insurance choices and provide producers with considerations for their 2021 options. Other webinars have been economic outlook sessions.

To view what has been occurred and their upcoming programs go to their web sit at :

<https://ag.purdue.edu/commercialag/home/> They do have a lot to offer. You can also sign up to receive their monthly newsletter with farm management program and resource updates.



The Global Agriculture Innovation Forum is a joint undertaking between USDA's Foreign Agricultural Service and Purdue University's Office of International Programs in Agriculture. The Forum will be valuable to entrepreneurs, producers, value-chain operators, service providers, and researchers, as well as donor agencies and implementing partners and will consist of a series of virtual events held throughout 2021. Participation is FREE and open to all who have an interest in the application of agricultural innovations.

As the year unfolds, we will conduct up to six virtual events, each consisting of a mainstage event and a series of side events, including ePoster sessions. Participate by entering or voting in multiple pitch contests where entrepreneurs present their business ideas to a panel of judges and compete for cash prizes.

The anticipated innovation themes include:

1. *Farms and Farmers of the Future – March 2, 2021*
 2. *Innovations in Genetic Improvement of Agricultural Systems – May 4, 2021*
 3. *Innovations in Post-Harvest Management – June 29, 2021*
 4. *Innovations in Entrepreneurship, Especially Among Youth – August 12, 2021*
 5. *Innovations in Information and Communication Technologies – October 15, 2021*
- Innovations in Scaling – December 14, 2021*

For more information and to register visit: <https://registration.socio.events/e/globalaginnovationforum>

FORAGE FORUM FRIDAYS

JOIN PURDUE EXTENSION AND FORAGE
INDUSTRY SPECIALISTS AS THEY
DISCUSS A WIDE VARIETY OF FORAGE
TOPICS EACH FRIDAY AT NOON (EST)

MARCH 5-SOILS
MARCH 12-FORAGE SPECIES SELECTION
**MARCH 19-PASTURE DEVELOPMENT &
RENOVATIONS**
MARCH 26-MAKING QUALITY DRY HAY
**APRIL 2-MAKING QUALITY
HAYLAGE/BALELAGE**
APRIL 9-PROPERLY MANAGE PASTURES
APRIL 16-ROTATIONAL GRAZING

**TO REGISTER FOR THE
SESSIONS, VISIT:
<https://bit.ly/2LIPnZK>**

Purdue University is an equal opportunity/equal access/affirmative action university. If you are in need of accommodations to attend this program, please indicate on the registration form, or contact Elysia Rodgers 1 week prior to the session you wish to attend at 260-925-2562 or eberry@purdue.edu.

Pesticide License Information

There are new ways to get credits on pesticide licenses and one of those is by sitting at home and listening to a program on your computer.

Below is one such upcoming program, Ripley County Cover Crop/No-Till Virtual Workshop. No more cold nights with fog and ice.

Just stay home and listen but you still have to send money.

There will be more of these virtual programs coming up.



Ripley County Cover Crop/No Till Workshop offering Pesticide Recertification Programs and Commercial CCH's

Tuesday, March 30, 2021 at 9 AM EST

Topics

9:00 - 9:15 AM David Osborne – Purdue Extension – State Pesticide Update

9:15 – 9:45 AM Joel Wahlman – SEPAC Manager - Managing cover crops on the farm

9:45-10:15 AM **Dr. Shalamar Armstrong - Associate Professor of Agronomy – Soil and fertility management in cover crop systems**

15 Minute Break

10:30 – 11:00 AM Alex Helms – Potassium Fertility

11:00 – 11:30 AM Eileen Kladvko – Professor of Agronomy - Tile drainage impacts on cash crops and cover crops, and a 35-year summary

Applicators wishing to receive recertification credit must SEND Name, email address, \$10 (make checks payable to Ripley County Extension), and their PA number to:

Purdue Extension

525 West Beech Street

Osgood, IN 47037

Meeting connection information will be sent once this is received.

2 CCH's for Categories 1,14, and RT

SHEPHERDS CAMPFIRE MOVES TO ROCHESTER

Farm Tour News Release

A group of sheep producers who meet quarterly, usually in the LaGrange County area, will be headed to Fulton County for their March 15 meeting.

The meeting will convene at 6:00 pm with a meal sponsored by the Indiana Sheep Checkoff at the Talma Community Building located on State Road 25 in Talma.

The focus of this meeting will be on profitability and facilities. The session will conclude with a visit to Hidden Valley Polypays operated by Glen & Chris Jones at 4750 N 450 E Rochester. This flock specializes in production of replacement ewes and breeding rams for the commercial sheep industry with animals sold into several states from Iowa to Maryland in most years.

The flock is enrolled in the National Sheep Improvement Program allowing selection on breeding values for traits such as weaning percent, growth rate, parasite resistance, and a host of other economically important traits. They will be lambing at the time of our visit and should have 100+ lambs on the ground with a few being raised on cold milk replacer.

There is no cost for attending the meeting and all who are interested in sheep production are invited; however pre-registration is required. Transportation from the LaGrange County area will be available at no cost.

To preregister, contact Shepherds Campfire at 260 214 4334.



Lambs Prior to Weaning



Winter Feeding

My curiosity was awakened while visiting an organic farmer from Missouri three years ago. Walking away from the hog pens, I observed that the bare ground was covered in algae. Questions that came to mind were, was it there because water stood in that spot, because the farm was organic, or perhaps was it just that the soil type contributed to a good environment for algae growth.

That picture came to mind as I was reading the Food and Agriculture Organization of the United Nations, report on soil biodiversity. Our soils are full of vast numbers of organisms; bacteria, fungi, viruses, mites, nematodes, millipedes, ground beetles' earthworms and much more.

Our eyes see the larger parts of nature including birds, bugs, plants and mammals. But underfoot there exists a complex interacting web of organisms that give life to soil and ultimately to us. Some things such as ants we can see, others like bacteria are unseen to unaided eyes. A gram of soil contains a billion bacterial cells and enough fungus structures to stretch the length of two football fields. In the whole environment, bacteria alone hold more carbon than all the plants on earth.

So many times, we think of organisms in a negative way. Bacteria are often viewed as a potential infector of humans, fungi as a cause of plant disease and nematodes that can produce both plant and animal issues.

A certain type of nematodes is the nasty worms that infect the goats on my place. They colonize the stomachs of the animals where they suck the blood and leave them anemic enough to potentially kill them. Other types of nematodes will infest soybean roots resulting in tremendous yield reductions. In sheer numbers, nematodes are the most abundant group of animals in soils and represent around 80 percent of all animals on Earth.

In the genre of life, there are good and bad characters. Beneficial nematodes can be purchased for control of things like lawn grub worms. One species actually seeks out grub worms and injects a bacteria harmful only to grubworms. Just remember the word beneficial is relative. It is good for us, but not for the grub.

There are mite species that prey on plants and animals and there are mites that prey on other mites. Some are also voracious consumers of nematodes.

So, what about that algae? The world is home to over 1500 known species of these mostly green organisms that function like green plants in converting the carbon dioxide in the atmosphere into soil organic matter. Additionally, the algae I was seeing binds soil particles and decreases soil erosion, while increasing rainwater storage, and reducing water loss by evaporation during dry periods. They are also able to breakdown and detoxify pesticides and protect the soil from ultraviolet light.

At the same time, herbicides can disturb the growth of soil microalgae. On that Missouri organic hog farm, herbicides were not used and consequently, soil algae flourished. Although good on the soil, algae in the water can be extremely detrimental to humans and animals. These water types, called blue-green algae, produce a variety of toxins. The most visible image of this problem is in the most shallow and warmest of the great lakes, Lake Erie where in some years algae have covered 7% of the lake. Unlike the good news-bad news of many organisms, this one just seems to be a bad deal.

First Day of Spring Saturday, March 20, 2021!



As I walk through the pasture, familiar plants are all around, crested wheat grass, lead plant, buck brush and sage. No, I am not in Northern Indiana, but on the prairies of my wife's family ranch in South Dakota where I have visited at least yearly for the past 39 years. There the cattle graze on totally different plants than what we find here. Just like the plants growing there represent species that can handle the rugged and cold environment, the cattle have adapted to know which of these plants to eat and which ones not to consume. How do they know? Because momma told them.

It is interesting to watch the learning environment of a young animal. Within the first week of life, new born goats are watching what their moms are eating and start to mimic them. First, it is the hay and soon they notice how eagerly mom goes for the grain, so they are soon eating out of the same pan, just like momma.

Just like we praise children when the day comes that they can wear big boy pants. Livestock are anxious to mimic their mom. A study in the 90's demonstrated how a mother could influence her offspring to eat more of a low-quality food. Researchers exposed goat kids to a southwestern plant called blackbrush. One group was with their mothers and another group without. When the kids were 4 and 13 months old they were given the plant again. The kids that ate it with their mothers when young consumed about twice as much of the poor-quality shrub, compared to the control group. The group that had been exposed to blackbrush with mother continued to eat more of the shrub even as increasing levels of nutritious alfalfa pellets were offered alongside blackbrush. Momma never taught them to eat alfalfa.



The picture is from the South Dakota ranch where cattle are adapted to a variety of non-Indiana plants.

A local beef producer purchased a bull from Texas and it grew poorly on the Indiana alfalfa orchardgrass pasture it was brought to graze. Our lush forages are not what they were raised on in Texas.

I have a University of Arizona publication that speaks of an experiment done with 4 groups of goats that had been reared in 4 different types of forages. "Then they were placed together in a diverse pasture comprised of about 100 plant species. Animals from each group still continued to prefer the forages on which they were originally raised. They were then tracked for the next four years and diets gradually converged across the four goat groups. Each successive generation of goats still preferred a few key plant species that could be traced back to the original goats grazing that the first year of the study."

The animal that does not have an opportunity to learn from mom are dairy calves. I have never seen data, but I suspect, they have more of a tendency to potentially eat a plant they should not. One that might be toxic.

Once a plant makes an animal sick they are more likely to remember it and stay away. I just had a goat sick for 4 days with diarrhea when she ate too much grain. She is now back to eating some grain, but very little. However, it just seems like in the world of grain, their memory is short. Everyone is greedily trying to get all they can and they fall back into the habit of being part of the aggressive crowd. Humans talk about crowd psychology where people will do something in group that you would not alone. Goats are a great study in herd behavior, you can watch them fighting off one animal, all while others are busily taking their grain. It goes back to the concept that animals can only process one thought at a time. They see an immediate threat but don't comprehend the long-term consequences.

Humans need to know the long-term consequences. That is why the old term, animal husbandry, should still be part of our thinking as a livestock owner. It is more of a holistic concept. Any discussion of holistic agriculture should start with the phrase, "In the beginning." To know where we want to go, we have to see from whence things have come. It would be nice to know what they were eating while they were there.

<http://www.ag.purdue.edu/counties/fulton/pages/default.aspx>

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