The Digital Ag Download

An eNewsletter with research updates, digital ag news, and tech insights for your farm.

2019 Fall Updates

While it feels as if we just finished planting, it is time to start looking forward. There are several events coming up that we have shared with you in this edition of the Digital Ag Download. We have also included some helpful articles and resources to help you prepare for the nearing harvest months. We believe you will find much of this information to be valuable on your farm. Be sure to share this newsletter with anyone who may be interested; we hope you enjoy!

– The Ohio State Digital Ag Team

Digital Agriculture at OSU

2019 Farm Science Review

The *57th annual Farm Science Review* will be held next week, September 17th-19th. Visitors to the premier outdoor agricultural education and industry trade show will walk away with advice they can use to improve their farm operation, large or small. Click on the link below to purchase tickets. Tickets purchased after September 6th will be available for pick up at Gate D (will call) on the south east end of the exhibit area. We're excited to see everyone at the *2019 Farm Science Review*!

Farm Science Review

| AgTech Expo | Precision University |

What: A two day event focused on bringing you the latest products and developments in agricultural technology. The AgTech Expo allows farmers and retailers to customize their learning experience.

Where: JW Marriott
10 South West Street
Indianapolis, IN 46204

When: December 16-17, 2019

To learn more about this event and too see the full event schedule, click below.

AgTech Expo

What: A day long program packed with expert speakers and information focused on technology to minimize compaction and maximize soil productivity.

Where: Champions Center
4122 Laybourne Road
Springfield, Ohio 45505

When: January 8, 2020

Click below if you are interested in being a sponsor or vendor for the 2020 Precision University.

2020 Precision U

2019 eFields Report

This year the Digital Ag team is working hard to bring you a new and improved eFields Report. Our contributors, collaborators, and supporters are dedicated to bringing you a diverse resource to help aid the decision making on your operation. Despite the challenges this spring, we look forward to sharing what we've learned in the 2019 eFields Report!

New studies included in the 2019 eFields Report:
- Cover Crops
- Biological Seed Treatment
- Irrigation Timing
- The Effects of Planting Date on Yield

If you want to get involved or learn more about the eFields program, click below. Stay tuned for more updates on the 2019 report!

eFields Home Page

The Reality of Artificial Intelligence

Challenges in the Implementation of Ag Tech Today

Industry changing advancements are no longer 10-20 years out. They are here! Chris Weigman, PhD student, is working on developing neural network classifiers to use in crop diagnostics. His goal is to model human learning in computers so they can recognize things like Nitrogen deficiency. This technology would help tremendously with the scouting process, as some field scouts may only cover a small portion of a field to make management decisions on a much larger area.

See the full article below to learn more about training neural network classifiers and what impact this technology will have in the future.
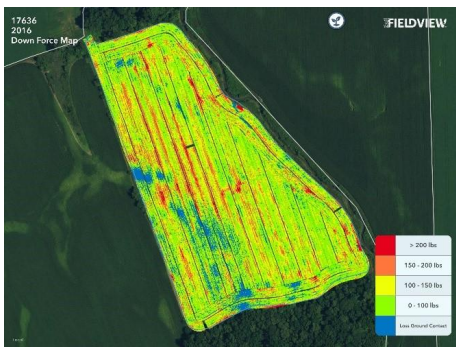
Reality of AI

Alexandr Sakal from EOS Crop Monitoring recently released an article discussing the different obstacles to ag technology adoption. Agriculture is a very old practice and is conservative in nature. While some farmers hold on to traditional practices, experts insist that precision farming and ag technology are essential to success in the future. So what might prevent farmers around the world from adopting new technology? A few challenges that Alexandr discusses are land limitations, cost of adoption, and lack of education.

Learn more about the challenges to ag technology adoption in Sakal's article below.

Challenges to Ag Tech

What Is the Value of Sharing Farm Data?

In a PrecisionAg article written by Dr. John Fulton and Jenna Lee, the value of sharing farm data is questioned. More data is being collected now than ever, but it is only valuable if it is analyzed and used. Many farmers are still wondering what the pros and cons of sharing their data are. One of many benefits is that the farmer can learn about information that he/she can use to make decisions and solve complex issues that they could not solve before. In their article, Fulton and Lee include the results of a farmer survey on data sharing that was conducted by several universities.

To view the results of the farmer survey and to read the full article, click below.

Yield Monitor Calibration

While we have time before harvest is here, its important to be proactive in preparing for this critical time of the growing season. This article by Dr. John Fulton and Dr. Elizabeth Hawkins stresses how important yield maps are in understanding end of the year performance and variation in-field. Information about that variation is what guides prescriptions, recommendations, and decisions. This article outlines some procedures to follow to ensure your yield monitor is functioning properly and you are collecting reliable data.

To learn more about why you should calibrate your yield monitor and how to properly manage it before and during harvest, see the full article below.

Value of Sharing Farm Data	Monitor Calibration

Q&A With Precision Ag Specialist, Scott Shearer

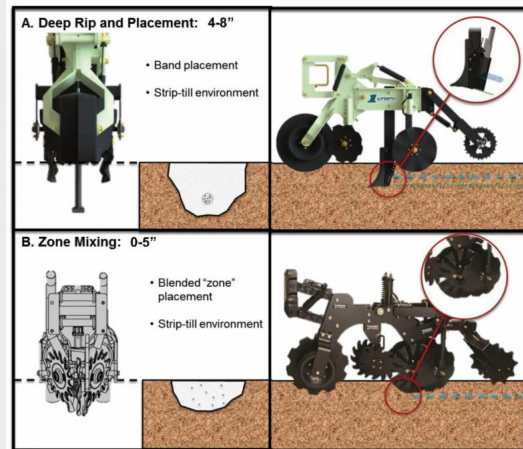**Q:** Why do you feel precision agriculture is important?

A: Precision agriculture is one of the few technologies that actually serves the interest of producers, as well as those people concerned about the environment.

Learn more about Dr. Scott Shearer, Chair for the FABE Department at Ohio State, in this Successful Farming interview published by Laurie Bedord. In his interview, he shares the story that started his passion for precision agriculture, his thoughts on the adoption of precision technology, and some of the projects he has worked on at Ohio State.

Learn more about Dr. Shearer in the full article below.

Q&A with Shearer

Sub-surface Nutrient Placement Options

An article by Dr. John Fulton and Trey Colley dives into the best management practice (BMP) of sub-surface nutrient placement. The correct sub-surface implement to use on a farm depends on the management strategies of that farm. An OSU Fact Sheet exists to help farmers decide which implement is the best fit for their farm by providing the different options and benefits of each. Fulton and Colley recommend finding the tool that maximizes the value of that pass across the field.

Read the full article to learn more about how you can choose the best sub-surface implement on your farm.

For more nutrient application resources, you can visit the **Precision Crop Management** page on the Digital Ag website or the **Opportunities for Sub-surface Nutrient Placement in Ohio** Fact Sheet.

Sub-Surface Placement

Save the Dates!

- Farm Science Review - September 17-19th
- Ag Tech Expo - December 16-17, 2019
- Precision University - January 8, 2020

Share the knowledge!

Help grow the popularity of "The Digital Ag Download" by sharing with growers, extension folks, and anyone interested in your neck of the woods! Just tell them to sign up and send them this link to go to our signup page:

go.osu.edu/DigitalAgDownload

CONTACT US!

digitalag@osu.edu

Department of Food, Agricultural and Biological Engineering
Agricultural Engineering Building
590 Woody Hayes Drive, Columbus, OH 43210
Phone: 614-292-6131
Fax: 614-292-9448